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RHYTHM AND HARMONY

IN

POETRY AND MUSIC

TOGETHER WITH

MUSIC AS A REPRESENTATIVE ART

TWO ESSAYS IN

COMPARATIVE ÆSTHETICS

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BY

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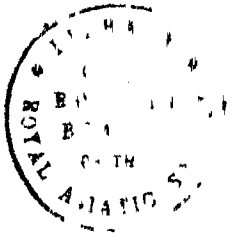

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PREFACE.

"HIS tendency is to systematize that which is beyond the reach of systematic exposition," "to formulate ideas and qualities not reducible . . . to formulæ," "full of learning and suggestive as the book is . . . one is lost in its infinite wrinkles," "fills the mind . . . with a tremendous lot of fancies,"—such are the comments with which some are now qualifying their acknowledgments—very late in many cases—of the essential differences between the thought presented in this series of essays, and in previous works upon the same subject. Were there proof that a single writer of such comments had made a sincere endeavor to follow the lines of thought which in these essays have been developed in accordance with the simplest principles of logic and common sense, the opinions thus expressed might be entitled to grave consideration. As it is, they are very apparent utterances of superficial impressions, such as naturally occur to any one who has not looked into a subject deeply enough to be fully aware of its complexities, or of the essential importance and possibility of analyzing them.

As applied to the essay on "Rhythm and Harmony in Poetry and Music," the pre-judgments of every one of these critics would agree with that of the first of two authors conversing, a year or more ago, in language somewhat as follows: "No one can explain the methods underlying

the subtle harmonies of Swinburne's lyrics." "Not the first who attempts it, perhaps; but do you think it intrinsically impossible?" "If he could explain the methods, he could produce the effects; and we can't have two Swinburnes." "Are you sure of your inferences? I may be able to explain exactly what it is in the shading or coloring of a picture, in the pose or gesture of a figure, which represents the meaning that attracts and charms me. But, unless myself a painter, I can't make a figure like it." "What object would your explanation gain then?" And this was the reply:

First, a philosophic object. The causes underlying the effects of art are in themselves as interesting as any underlying the effects of nature—like the rising and falling of the tides, the coming and going of the storms, the sprouting of the leaves in spring, and their falling in the autumn. And, second, a practical object. If a man be a painter, to let him know precisely what it is that charms us in a color or an outline may enable him by a few touches to change an unsuccessful product into one fitted to charm all those whose tastes agree with our own. And so with a poet. Those who have ever attempted verses know the constant danger of having the forms—metre, alliteration, assonance, rhyme—to which their thought is harnessed, run away with it and wreck it. Yet without the aid of these, what could carry the thought a single step in an artistic direction? The poet must learn to get along, not without them but with them; yet in such a way as to keep them in subjection, as exemplified in what is done by the acknowledged masters.

And there is another practical object to be gained. This is to enable critics and through them, and in connection with them, people in general to understand and hence

to appreciate and enjoy that in art which is excellent. At present, it has to be acknowledged that to attain this object seems wellnigh beyond hope. Owing to a lack of breadth and balance characterizing the practical limitations of American culture, a man here who tries to treat art philosophically finds his way blocked at the very threshold of his undertaking by two almost insurmountable obstacles. One is that few of our philosophers have had sufficient æsthetic training to be interested in that which concerns art; and the other is that few of our artists—including our art-critics, though there are noteworthy exceptions—have had sufficient philosophical training to be interested in that which concerns philosophy. Accordingly, as a rule, the philosopher never looks at the art-book at all; and the art-critic on whom the public relies for information concerning it, does so merely because he cannot dodge what is tossed directly at him as a reviewer; but the little that he sees of it he usually misapprehends and very frequently misrepresents.

These statements are not uncharitable. They are essentially the opposite. Otherwise, if articles published in some of our foremost journals—journals that would be universally placed upon every list of the first half-score critical authorities in our country—could not be attributed to a lack of intelligence, one would be obliged to attribute them to a lack of integrity. For instance, it is a simple logical process, before defining the exact limitations of a subject, to show its relations to other subjects by separating it from its surroundings; in other words, to advance from the generic to the specific; and nothing, to a well-trained mind, could appear more unjust than to represent the beginning of this process as if it were the end of it. Yet a criticism upon "Art in Theory," published in "The

Independent" of New York, opens with this sentence: "The definition of art that it is 'nature made human' may do in a way for the literature of a certain broadly naturalistic school, but will hardly answer for art in its wider general relations." The reader would certainly infer from this—and nothing further is quoted as a text for the wholly unwarranted "enlargement" that follows —that the phrase taken from the book was the final result of an endeavor to distinguish carefully the characteristics of *æsthetic* art; and that the author who had formulated the definition was not aware that it was too broad for the purpose. The last thing that any one would conceive would be that what is really said of this definition on page 6 of "Art in Theory" is the following: "*Nature made human*, or *nature remade by the human mind*, is, of course, a very broad definition of art—one that scarcely begins to suggest all that is needed for a full understanding of the subject. But . . . it will serve as a starting-point for what is to follow"; or that in the very next sentence, at the opening of the next chapter, is begun a distinction between art as thus defined and æsthetic art.

Again, in the same book, the argument for the theory of beauty that is presented is reinforced by showing the substantial agreement with reference to certain underlying requirements of beauty between all the prominent writers on æsthetics, no matter how greatly they may differ in other regards. The concise yet comprehensive statement and classification of these views, for such a purpose, would, alone, to a thinker, justify the preparation of the entire volume. But a criticism in "The Nation" not only fails to recognize the force of this concurrence of opinion; but even why it should be supposed to have any force.

"The author's reading," the public are told, "on everything even remotely connected with the subject, has been immense, and quotations from every one under the heavens are as plentiful as blackberries in his pages . . . they over-load them," etc. Of course, a comment like this could not be phrased in such language, except as an expression of inability to apprehend the object of the quotations, and not only this, but even the elementary fact that it is desirable for an author, before contributing to a subject, to take pains to inform himself with reference to what others have already contributed to it, and, if possible, to avail himself of their contributions even to the extent of beginning to develop his system where their systems have ended.

Once more, in "Art in Theory," an endeavor is made to find a simple and single conception of beauty fitted to meet the requirements of those who attribute it to essentially mental results like association, adaptability, and conformity to ideals, and also, at the same time, of those who attribute it to essentially physical results like quality or complement in tone or color. The general conclusion reached, which, if true, is of the utmost philosophic and artistic importance, is summed up on page 162 in language which certainly ought not to be difficult to understand, to wit: "The highest beauty, in all its different phases, results, as is the case in other departments of excellence, from harmony in effects. Analyzing the elements of these effects, carries with it the additional conclusion that, so far as beauty is physical, it results when sounds, shapes, or colors harmonize together and in such ways that their combinations harmonize with the natural requirements of the physical senses—the ears or eyes to which they appeal; that, so far as beauty is psychical, it results

when the thoughts and feelings suggested or expressed through forms harmonize together, and also with the natural requirements of the minds that they address; and that, so far as it is both physical and psychical, it results when all the elements entering into both physical and psychical effects harmonize together, and also with the combined requirements of both natures in the man subjected to their influence. In this latter sense, it will be observed that complete beauty necessitates something more than that which is either formal or expressional. It can be obtained in the degree only in which a form beautiful in itself fits a beautiful ideal conjured in the mind by the imagination as a result of a harmonious combination of thoughts and feelings." Immediately following these statements in the book, the ideas in them are abbreviated in a definition expressed in terms concise, and, perhaps, for those who have not read the preceding pages, unnecessarily technical. At least, this impression of it seems to have been conveyed to no less than four reviewers, who, ignoring the ample explanations of the preceding paragraph, have flung the briefer statement toward the public as a sort of specimen boulder to show what a hard road would have to be travelled by one attempting to drive his thoughts through the volume. Even this definition alone, however, might seem clear and acceptable enough if quoted accurately. But it has been quoted inaccurately. Here, with the italicized phrases omitted, is what it has been represented to be: "Beauty is a characteristic of any complex form of varied elements producing apprehensible unity (*i. e.*, harmony or likeness) of effects upon the motive organs of sensation *in the ear or eye*, or upon the emotive sources of imagination *in the mind; or upon both the one and the other*." Moreover, from a text, thus prepared for his pur-

pose by himself, through the omission of words necessary in order to render its meaning clear and exact, one critic goes on to argue against its vagueness and "inexactness." Besides this, too, he attempts to discredit the definition, upon the hypothesis that by a complex form's producing "apprehensible unity of effects" "in the ear and eye, or upon the emotive sources of imagination in the mind," is meant the same as if it had been said that beauty is owing to a mere intellectual apprehension of the fact that a form is not simple but complex in its structure.

Such criticisms as these that have been quoted are, of course, not worthy of attention in themselves. Nor would it be in place here to draw the natural lesson which they suggest with reference to the duty of a reviewer to study a book sufficiently to let the public know the facts about it,—what distinguishes its views from those of other books upon the same subject, what is the purpose of the quotations made in it, and what is the exact nature of its conclusions. But there are other reasons directly connected with our subject, why comments of the kind noticed need mention. One reason is that the attitude of mind toward the philosophic aspects of art, indeed toward all truth in general, which they indicate, suggests a lack of the kind of intelligence and insight which are essential in order to appreciate the practical results of art, whether in the past or present. The other reason is, that these particular reviews were published in periodicals supposed by many to represent high critical authority in our country. For both reasons, the question forces itself upon one—Where is art-thought, and art, and all that art is worth, likely to be led by such an attitude of mind?

This is not an idle question. It is one of grave import-

ance. In what sense it is so, may, perhaps, be best revealed to the reader by retracing for him the considerations which first revealed its import to the author. These were gradually brought to his attention while examining a series of criticisms concurrently made in different journals in an effort to discredit a fundamental proposition in "Art in Theory," namely, that, in all successful art, the proper balance must be preserved between the requirements of significance in the form and the requirements of form considered only in itself. The proposition, at first thought, seems almost too apparent to need even to be stated. But on second thought no one can fail to observe that, if accepted as true, it will necessarily put an end to the suppositions of those who consider art to be merely a matter of *technique*. And it is undoubtedly this threatened danger to their own conceptions that accounts for the way in which a certain class of critics have seen fit to deal with the views presented in "Art in Theory." For this reason it will be interesting, and possibly instructive, to notice just how much intelligence and insight have armed the weapons with which these views have been attacked. The examination of the criticisms will be in place, too, in this preface, because it will ultimately lead to a statement of the exact relations to the general subject of art of those technical phases of it which are treated in the present volume. The relevancy of the first criticism to be quoted lies in the fact that it is a comment on a brief historical review in "Art in Theory," intended to show that the acknowledged errors of extreme romanticism and classicism are traceable, respectively, to the undue emphasizing, in the one, of significance, by which, as repeatedly stated, is meant an "expression of thought and feeling"; and in the other, of form. In

approaching a refutation of this statement, a critic in "The Independent" first refers to the "astounding misapprehension" of this view, and then goes on to say:

"We cannot at all admit that . . . 'the production of something that imitates a previously existing form or subject is now one of the recognized meanings of the term classic.'" Why can he not admit this? Can it be that he is unaware that, at the present day, which is what is meant by the word *now*, men, when they speak of a modern artist as producing a classic face, or temple, or drama, or allusion in a drama, invariably suggest a likeness in it either to a Greek face, or temple, or drama, or allusion containing Greek mythological references? or else, if not, at least a likeness to some form which, as a form, is sufficiently old to have a recognized character? And does he not know that the reason for this suggestion is that "one of the recognized meanings"—not the only meaning mentioned in "Art in Theory," but one mentioned in its historic connections—"of the term classic is the production of something that imitates a previously existing form or subject?" One would think that everybody ought to know this. "Les classique," says a French criticism lying before me now, "le classique c'est-à-dire ceux qui perpétuent une *manière*." But this reviewer does not know it.

However, he probably fancies himself in good company—for America. An earlier critic in "The Nation," quoting from "Art in Theory" the statement that "the germ of classicism is the conception that art should chiefly emphasize the form," and of romanticism that "the ideas expressed in the form should be chiefly emphasized," had exclaimed: "Sound not sense was certainly never a motto of classical literature." And who had said that it was? Does the care-

fully worded phrase "chiefly emphasize" mean "exclusively emphasize?" Or does the term "sound" include all that is meant by "form"? When we speak of dramatic "form" do we often even suggest the idea of "sound"? What we mean then is the general method of unfolding the plot as a whole. This attempted refutation reveals, once more, that lack of philosophic discrimination to which reference has been made. But connected with it, there is a still greater lack of historic knowledge. Who has never heard of the famous theatrical contest between the classicists and romanticists in Paris, which once almost made a Bedlam of the whole city, because Victor Hugo, the idol of romanticism, did not model his dramas upon those of his predecessors, which, in turn, were modelled upon those of the Greeks? What was Hugo contending for? For the right to emphasize chiefly the ideas behind the form—to speak out naturally upon a modern subject, with a style to fit it, whether it assumed a conventional form, or one that nobody before had ever attempted. But no, says one of these critics: "Classicism and Romanticism are tempers of mind." "They owe their origin," says the other, "to a difference in mental constitutions." Of course, there is a truth in this. By nature men are inclined toward the one or the other. But one might say the same of almost any different phases of mental action. He might say it of the tendencies to intemperance or gambling. But would his saying this explain what either of these is? Certainly not; for only when the tendencies come to the surface and reveal themselves in a form of action, do they exist in such a way that they can be differentiated. The same is true of classicism and romanticism. They cannot be differentiated till developed into a form of expression. The questions before us are, what is this form,

and what is there in it, as a form, that makes it what it is? To speak of differences in "tempers of mind" or of "mental constitution," is to mention something influential in causing a difference to be. But it is no more influential than is the spirit of the age, or the conditions of taste, or environment, or education; and it fails to suggest, as even some of these latter do, why it is that, at one period, all authors and artists incline to classicism, and at another all of them incline to romanticism; while, at some periods, the same man seems almost equally inclined to both. Goethe's "Leiden des jungen Werther's," for instance, and his "Goetz von Berlichingen" are specimens of distinctively romantic literature; whereas his "Iphigenie auf Tauris" is, perhaps, the most successful modern example of classic literature. At what period between writing the first two and the latter of these was his "temper of mind," his "mental constitution" changed? Is it not a little more rational to say that what was changed was his artistic method?—possibly, his theory of this?—that in the first two he "chiefly emphasized" the "significance," and in the last, "the form," causing it to be—what he did not take pains to cause the others to be—"something imitating a previously existing" Greek "form" not only, but in this case, a Greek "subject" also?

On the contrary, says one of these critics, elaborating his theory about "tempers of mind," "classicism is reasonable, logical, and constructive, while romanticism is emotional and sensuous"; and the other echoes his sentiments with something about "the eternal distinction between the intellectual and the emotional." And so one is to believe that the distinguishing feature of classic Greek sculpture—like a "Venus," a "Faun," or a "Group of the Niobe,"—or of a classic Greek drama, like the "Antigone,"

is, that it is not sensuous or emotional; and that the distinguishing feature of the plays of Shakespeare or Hugo, or of a Gothic cathedral, is that they are not reasonable or logical or constructive! Of course, there is a cause underlying the distinctions that these critics are trying to make. It is suggested too in "Art in Theory." On page 25, the statement is made that one characteristic of romantic art is that in it the form is "determined solely by the exigencies of expression," and on page 17, at the beginning of the chapter in which this statement occurs, as well as in scores of other places in the book, it is explained that by the term expression is meant a communication of thought and feeling combined. Without any explanation indeed, this meaning would be a necessary inference from the fundamental conception of the book, which is that all art is emotional in its sources, and that art-ideas are the manifestations of emotion in consciousness (Chapters V., XVIII., and XIX.). It follows from all these facts together that emotion—but not without its accompanying thought, which, sometimes, as with Browning, throws the emotion entirely into the shade—has a more unrestricted expression in romantic art than in classic art. In the latter the form is "chiefly emphasized," and therefore there is a more conscious, as well as apparent exercise of rational intelligence engaged in constructing a form for it, and in confining the expression to the limits of this form. But we must not confound the effects of this difference with that which causes them. This is the method of the artist when producing his art-work, a method influenced by the relative attention which he gives, either consciously or unconsciously, to the requirements of significance or of form. It is important to recognize this fact, too, because, otherwise, we should not recognize that he is the master of

his methods, and, if he choose, can produce in both styles, though, of course, not with equal pleasure, because he must have his preferences; nor with equal facility, because it is a matter of a lifetime to produce successfully in either. To suppose that his methods master him, is to show a lack of insight, with reference to the practice of art, still greater than that just indicated with reference to the theory of it. Goethe could write "Iphigenie auf Tauris" or the "Leiden des jungen Werther's." So, too, the same painter can "chiefly emphasize" form in his figures by using the distinct "classic" line, as it is termed; or, if he have been educated in another school, often merely if he choose, he can suggest the form with the vague outlines of the romantic impressionist; and the same architect also can plan a classic Girard college, or a romantic seaside cottage. To imagine otherwise, is to parallel the notion of a schoolboy that the poet tears his hair, rolls his eyes, raves in the lines of a lyric rather than of a drama, and makes a general fool of himself by a complete lack of self-control whenever he is composing at all, simply because he is "born and not made."

That this inference with reference to the error as to artistic methods is justified, is proved by the inability of critics of this class to recognize the necessity of making any distinction whatever between significance in form—not outside of form—and form as developed for its own sake, concerning which the reader may notice what is said in the Introduction to "Music as a Representative Art," on page 235.

It might be supposed that the definition of art there quoted, to the effect that it is "the application to *anything*, in the spirit of pleasure and for play only, of the principle of proportion," would be welcomed as a desira-

ble reinforcement of the truth presented in two hundred pages of an essay devoted entirely to the subject of "Rhythm and Harmony." But, as shown in that Introduction, there are reasons connected with the requirements of significance, that may be urged against this definition. Let us notice here certain other reasons of the same tenor which are connected with the requirements of form.

Go to critics of literature who believe that art is "the application to anything" of the laws of art-form—which, for reasons given on page 235, is a strictly just way of shortening what is meant by the exceedingly loose use of the term *proportion* in the above definition—and ask them who is the first English poet of the age. They will probably answer—and few would differ from them—Swinburne. Now ask them what is the influence upon life of the thought presented in his poetry, what is the particular phase of inspiration to be derived from it; and they will probably answer that to them as critics this is immaterial; that not the thoughts of the poet, not his subjects give him his rank, but his manner of presenting them, his style, the rhythm of his verse, and its harmony as produced by alliteration, assonance, or rhyme. Again, ask a critic of painting of the same school to show you the best picture in a gallery. He is as likely as not to point you to the figure of a woman, too lightly clothed, posing not too unconsciously near some water; or, too heavily clothed, sitting in front of a mirror. You ask him what is the peculiar phase of thought expressed in this picture, the particular inspiration for life to be derived from it; and he will look at you and laugh. Nothing to-day, in our country, is supposed to show more ignorance about art, than the conception that interest in a picture has any-

thing to do with a subject, or with its suggesting a story, whether inspiring or otherwise. We must judge of the picture, we are told, entirely by the form, the style, the use in it of light and shade and color.

But, you say, there certainly was a time when theories of art were different. Dante, Milton, Wordsworth, yes, and Shakespeare, Goethe, and Schiller too,—all these had style or form, yet what one thinks of chiefly, when he reads them, is not this, but the thought that is behind it. Then there is Raphael. On a Sunday, one could sit for an hour before the Sistine Madonna, and feel more benefited than in most of the churches. But Raphael's is not a name, you find, with which to charm the modern critic. You are told that you are behind the age. This statement gives you a new suggestion, and you proceed to apply it. You ask yourself if the same may be true with reference to your views of literary art. You take up the nearest periodical and read the poetry in it, and its criticisms upon poetry. What are the new poets doing? What is it in their work that excites praise? The thought?—its breadth of conception? its completeness of development? its power of expressing truth fitted to uplift spiritually? How often do we see, in an American criticism, anything like an analysis of a new American poem? How often do we see an effort to bring to light the subtle character of the philosophy of which it is the expression? And there is the kindliest of reasons why these are not seen. A suggestion of logical arrangement, as in Dante or Milton, a hint of ethical maxims, though set as brilliantly as in Shakespeare or Schiller, would give a poet of our own day, were he commended for these particularly, a hard tramp up the road to recognition. What our people want is style, form. "Yes,"

say the critics, "but imaginative form. You can't object to that." Certainly one can—to imagination used for mere form's sake. Imaginative form has value only when it images a truth; and this is that which our modern critics have forgotten. Any comparison, however odious, will do for them, if it be only a comparison, and almost any style if it only ring, even if as hollow as some of the French forms of verse that our magazines admire so much. Not, of course, that the style must always be as dainty as in these. Some of us prefer to take it—as the English do their cheese—strong, with plenty of light and shade, and if the former be leprous and the latter smutty, so long as the effects are anything but weak, our critics, especially of our religious journals, are apt to like it all the better. The truth is that the moment that, through an overbalancing regard for form, people come to think that it alone has value, and that the subject in art is immaterial, they are in a fair way to become realists in that very worst sense in which it means believers in the portrayal in art of any amount of ugliness or nastiness so long as it be only that which they term "true to nature." This is the belief which, at present, is uppermost in France, brought about in that country by the predominating influence, through more than one century, of a materialistic art-philosophy. It is the reason why, in deference to the supposed interests of art, the thousands there who dislike the practical results no less than we, do not protest against unsavory plays or novels, like some of those of Sardou or Zola, and can actually swallow their dinners without turning to the wall some of the pictures that confront them. It is the reason too—and this is usually overlooked—why people foreign to France, while willing to acknowledge that its artists in every department

outnumber many times those of any other nation, have never generally admitted a single French poet, musician, painter, or sculptor, into that highest rank where, estimating worth according to a standard of significance as well as of style, they have all agreed to place Shakespeare, Goethe, Beethoven, Rubens, Raphael, and Angelo. And this French attitude of mind toward art,—art which some believe to be the handmaid of civilization and religion, and the most powerfully elevating of any purely human influence;—this attitude of mind and this direction toward high achievement in art, is that to which almost all those potent in criticism in our country, to-day, are doing their utmost to point our own people.

In this preface, however, that which concerns us chiefly, is the influence of theories of this kind upon artistic form. Do those who hold that the subject of art can be "anything," continue to hold on to their belief in the necessity of a strictly artistic treatment of this?—or do their followers? It may be a new suggestion, but the plain truth is that usually they do not, and this because they cannot. If it be a law, as is maintained in "Art in Theory," that an artist, to be successful in his work, must always keep his thought upon two things,—form in itself, and significance in the form,—then he cannot think of only one of these without doing injury to both. He is like a man in a circus, riding two horses. The moment that he neglects one of them, it shies off from him; and, when he leans to recover his control of this, he finds himself balanced away from the other. Very soon, unless he wish to keep up a jumping exhibition, for which his audience have not paid, he will either ride no horse at all, or only one, and this is as likely as otherwise to be the very one that he at first neglected. So in art: unless a man preserve the

equilibrium between the requirements of form and of significance, no one can tell which of the two will finally appeal to him more strongly. Significance of some sort, for instance, to apply this to the case before us, is eternally present in art, no matter what one's theory may be concerning it. For this reason, when men have begun to think that the subject of art may be "anything," so long as the form is artistic, some of them, as just noticed, will soon begin to think that it may be "anything but what it should be." Before long, too, they will come to suppose —just as people come to admire most the disagreeable eccentricities of those whom they accept as leaders—that the art is all the better for having as a subject "anything but what it should be." Does this result appear improbable? Recall the almost universal comment of the art-editors in our country upon the rejection of the nude male figure prepared for the medal of the Columbian exhibition. The comment—probably true enough in itself—was that the authorities at Washington did not "understand" or "appreciate art." But think of any one's imagining that this fact was proved by this particular action?—as if the statues of our statesmen in the old Hall of Representatives in the Capitol could not be specimens of art unless all their pantaloons were chiselled off!—as if appropriateness of subject and of treatment had nothing to do with art in them or in this medal!—as if by reproducing, however successfully, a form representative of Greek life, we could atone, in a distinctively American medal, for misrepresenting American life!—as if, in short, there were not a large number of other considerations far more important as proving the possession of æsthetic appreciation than the acceptance of a subject which, when exhibited in an advertisement, would inevitably be deemed by hundreds

of thousands of our countrymen "anything but what it should be!" How long would it take a condition of art-appreciation, of which such a criterion were the test, to fill our public parks with imitated Venuses and Apollos, meaningless to our people except as reminders of the reigning beauties of else forgotten "living pictures"? What would be the effect upon our growing youth, were the thoughts excited by such productions to be substituted for the nobler and purer inspiration of works like St. Gaudens' "Farragut," or McMonnies' recently erected "Nathan Hale"?

The influence upon sculpture of this supposition that a subject of art may be "anything," has not yet, fortunately, in our country, been fully revealed. But the same cannot be said with reference to poetry. There are plenty of people among us, neither vicious nor morbid in their tastes, who, nevertheless, are inclined to fancy that, considered æsthetically, a shady theme is not only excusable but desirable, when furnishing a background from which to project into relief a brilliancy of treatment. Therefore, for his brilliancy, they accepted Swinburne when he first appeared; and to-day, though far less brilliant, they have taken up with Ibsen. How would it be, accustomed as they are now to these morbid themes, were another Ibsen to appear, an Ibsen so far as concerned his subjects, but without the present Ibsen's dramatizing skill? Would he, too, though destitute of the elements of form which once their school considered the essential test of art,—would he, too, be accepted as a foremost poet or dramatist? Strange as it may seem, he certainly would. Most of the service of praise to Whitman in the Madison Square Theatre in New York, some ten years ago, was piped by our little metropolitan singers, whose highest

ideal of a poet had been Swinburne, and whose most vehement artistic energy had hitherto expended itself almost entirely upon dainty turns of melody in rondeaus and villanelles. The result merely verified an old well-known principle. Extremes meet. The apotheosis of form, when the smoke of the incense clears away, reveals, enthroned on high, a Whitman; and not in any of Whitman's works is there even a suggestion of that kind of excellence in form, which once his worshippers supposed to be the only standard of poetic merit.

Precisely the same principle is exemplified in painting, too. When an artist starts out with an idea that the subject of art may be "anything," of course he begins to develop the form for its own sake. He has nothing else to do. But form may mean many different things. With some, it means the imitation of natural outlines or colors. With some, it hardly means imitation at all. It means the development of color according to the laws of harmony. Even where the subject of art is a person, even in portraiture, there are critics who tell us that the result should not be judged by its likeness to the person depicted. It is not a photograph, forsooth. It is a painting, to be judged by the paint, they say, and mean, apparently, by the color, irrespective of its appearance in the face portrayed. Of course, this supposition will be deemed by some unwarranted. Few would second it, made thus baldly. But we must judge of beliefs by practices; and scarcely an art-exhibition in New York fails to show some portraits on the walls—nor the ones least praised—in which those slight variations of hue which every careful observer recognizes to be essential to the effects of life in the human countenance, are so exaggerated for the sake of mere effects of color, that faces in robust health are

made to look exactly as if breaking out with the measles; or, not infrequently, as if the victim had had the disease, and died of it. Thus in painting as in poetry, and the same fact might be exemplified in all the arts, exclusive attention to form,—the conception that art is the application of its laws to "anything"—may lead in the end, and very swiftly too, to the destruction not only of all in art that is inspiring to the soul, but even of that which is pleasing to the senses. A law of art-form is worth nothing except as it is applied to forms that have worth; and that which gives them worth is not by any means synonymous with that which makes them "anything."

Contrast the conception that it is, with that underlying proposition of Lessing in his great criticism upon the Laocoön, namely that "the Greek artist represented nothing that was not beautiful. . . . The perfection of the subject must charm in his work." In this contrast is represented a difference between the American and the Greek ideal of art which may well cause serious reflection. And when we recall not only the literary works of Goethe and Schiller, but the marvellous advances in all the arts that are universally traced to the acceptance in Germany of the principles developed by Lessing, we can surmise just how much the acceptance of like principles might do for our own country, as well as how far we yet are from a position in which we may even begin to entertain a hope that they may ultimately obtain supremacy.

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RHYTHM AND HARMONY IN POETRY AND MUSIC

RHYTHM AND HARMONY IN POETRY AND MUSIC.

CHAPTER I.

CORRESPONDENCES BETWEEN ELEMENTS OF FORM IN THE ARTS OF SOUND AND OF SIGHT.

Introduction—Object of the Present Volume—The Arts as Separated by the Differences between Sound and Sight—Forms as Separated by Silences or Pauses among Sounds, and by Lines or Outlines among Sights—Chart of the Methods of Art-Composition—Separate Effects of Sound Differ in Duration, Force, Quality, and Pitch; and of Sights in Extension, in Light and Shade and in Quality and Pitch of Color —Respective Correspondences between Effects in Sound and in Sight—Combined Influences of these Effects as Manifested in Rhythm and in Proportion, and also in Harmony of Sound and of Color.

IN the volume entitled "The Genesis of Art-Form," the prominent methods of composition in art were traced from their origin in elementary conditions of mind or of matter up to the period in which they were said to result in rhythm, as applied to duration in time; in proportion, as applied to extension in space; and in harmony, as applied to quality and pitch, whether of note or color. A chart representing these methods, as treated in that volume, as well as their order of development and their interdependence, is inserted on page 3. It should be known,

too, that in the first volume of this series of essays, entitled "Art in Theory," Chapter XIV., the results attained by these methods were shown to be necessary to the effects not merely of art-composition, but also—and this explains their use in art—to those of all beauty, whether perceived in art or in nature.

The present volume is intended to take up the discussion of our general subject at the point where it was dropped in "The Genesis of Art-Form," and to study the developments in poetry and music of rhythm and harmony. In order to perceive exactly the nature of the task which this intention involves, as well as the correspondences between the phases of sound that are to be treated and analogous phases in the arts of sight, let us begin by recalling a few of the more prominent facts with reference to the effects of the arts in general.

As we do this, a first fact suggested is that poetry and music are composed of elements of sound appealing to the ear in the order of time, and that painting, sculpture, and architecture are composed of elements of sight appealing to the eye in the order of space.

A second fact suggested is that, as a condition for constructing a form whether appealing to the ear or eye, one must be able to apprehend and use more than one sound or one object of sight. A sound single in the sense of manifesting neither alteration nor cessation, would soon come to convey no more intelligence to the ear than absence of sound; and a single hue of the same shade from nadir to zenith would soon convey no more intelligence to the eye than absence of hue. In order to be understood and used by a man who cannot conceive of time or space except as it is divided into parts, that which is heard must be interrupted by periods of silence and

METHODS OF ART-COMPOSITION.

Mainly Conditioned upon the Requirements of the Mind.

Mainly conditioned upon	*Mind.*	*Matter.*	*Mind and Matter.*	*Mind and Matter.*
Mind.	UNITY.	VARIETY.	COMPLEXITY.	
Matter.	ORDER.	CONFUSION.	COUNTERACTION.	GROUPING.

Mainly Conditioned upon the Requirements of Matter.

Mind.	COMPARISON.	CONTRAST.	COMPLEMENT.	ORGANIC FORM.	DURATION IN TIME. EXTENSION IN SPACE.	RHYTHM AND PROPORTION.
Matter.	PRINCIPALITY.	SUBORDINATION.	BALANCE.			

Mainly Conditioned upon the Requirements of the Product.

Mind.	CONGRUITY.	INCONGRUITY.	COMPREHENSIVENESS.	SYMMETRY.	ACCENT IN STRESS AND LINE.	RHYTHM AND PROPORTION.
"	CENTRAL POINT.	SETTING.	PARALLELISM.			
Matter.	REPETITION.	ALTERATION.	ALTERNATION.	CONTINUITY.	QUALITY AND PITCH IN NOTE AND COLOR.	HARMONY IN NOTE AND COLOR.
"	MASSING.	INTERSPERSION.	COMPLICATION.			
Mind and Matter.	CONSONANCE.	DISSONANCE.	INTERCHANGE.	PROGRESS.		
"	GRADATION.	ABRUPTNESS.	TRANSITION.			

that which is seen must be separated from other things by outlines. This is the same as to say—and here we may refer to the chart on page 3—that what we hear must have a certain limit of duration indicated by pauses in the sound; and that what we see must have a certain limit of extension indicated by lines. How shall the artist determine what these limits shall be? Fortunately, in the more important regards, nature herself has determined them. As for poetry and music, they are both developed, primarily, from methods of using the human voice,—in the one case in speech, in the other in song; and, secondarily, from methods in which sounds external to man are produced. But whenever the human voice is used, pauses are used, both at comparatively short intervals, after separate words and notes, and also at longer intervals where it is necessary for the lungs to draw in air; and whenever sounds that are not produced by the human voice are heard, they too are separated by intervals of silence. Painting, sculpture, and architecture, again, are developed from the methods in which men use or perceive objects in the external world. All of these have outlines not only separating them from other objects, but generally also separating their own constituent parts from one another. What more natural than that the artist should accept such arrangements of things heard or seen in nature, and should let them determine, according to methods of imitation, the relative duration or extension that shall be manifested in his works? As a fact, we know that this is exactly what he does do.

Duration and extension, however, are not the only conditions that the artist must consider. As shown in "Poetry as a Representative Art," Chapter III., sounds may differ not merely in duration or the quantity of time

that they fill; but also in force, or the stress with which they are produced, making them loud or soft, abrupt or smooth, etc.; in quality, making them sharp or round, full or thin, aspirate or pure, etc.; and in pitch, making them high or low, or rising or falling in the musical scale. Sights, too, may differ in analogous ways, *i. e.*, not merely in extension or the quantity of space that they fill, which is the same thing as size; but also in contour, which is the same thing as shape, and is shown by the appearance of forcible or weak lines of light and shade; in quality of color, which has to do with their tints and shades and mixtures; and in pitch of color, which is determined by the hue.

In addition to merely stating these facts, it may be well to enlarge upon one or two of them. Notice, for instance, how true it is that *force* which gives emphasis to sounds, rendering them more distinct from one another than would be the case without it, corresponds to *light and shade*, which emphasize and render more distinct the contour through which one portion of space having a certain shape is clearly separated from another. Notice, also, that accented and unaccented syllables or notes, as they alternate in time, perform exactly analogous functions to those of light and shade, as they alternate in space. The impression of form, for instance, which, so far as it results from metre, is conveyed by varying force and lack of force in connection with divisions made in time, is the exact equivalent of that impression of form, which, so far as this results from shape, is conveyed by varying light and shade in connection with divisions made in space. Notice, again, that *quality* and *pitch* are terms almost as much used in painting as in music. They will be fully explained in another volume. At present it is

enough to say that the first depends, in both these arts, on the proportions of the combinations entering into the general effect; and that the second depends on the properties of the elements that are combined. Undoubtedly, too, it is owing partly to a subtle recognition of the correspondences just indicated that to certain effects in the arts both of sound and of sight the more general terms, *tone* and *color*, have come to be applied interchangeably.

Later on, in connection with the various divisions and subdivisions under which will be treated the different phases of form to be considered, it will be shown in what way each phase is influenced by all the methods which, in the chart, are represented as determining artistic development. Here it is sufficient to say that duration, limited by pauses in connection with force, as applied to the accents of syllables or notes, gives rise to rhythm; that extension, limited by outlines in connection with light and shade, as applied to contour or shape, gives rise to proportion; that quality and pitch of tone taken together furnish the possibility of developing the laws of the harmony of sound; and that quality and pitch of color furnish the same possibility with reference to the laws of the harmony of color. It is important to notice, too, that force or accent, while having to do mainly with rhythm, has a certain influence also upon tune, especially in poetry upon the tunes of verse, and in music especially where it is necessary to make the tune expressive of sentiment; also that, in the same way, light and shade, while having to do mainly with proportion, have a certain influence also upon color, especially in order to interpret the meaning which a colored surface is intended to convey, as, for instance, whether it is to represent what is flat or round. Correspondingly also it is important to

notice that quality and pitch of sound are often necessary for the full effects of force as applied to rhythm; and that the same elements of color are often necessary for the full effects of light and shade as applied to proportion. In fact, when used in the same arts, the effects that are now to be considered are none of them produced exclusively according to one method or to one combination of methods, but more or less according to all of them when operating conjointly.

CHAPTER II.

RHYTHM IN NATURE, MIND, AND SPEECH: HOW DEVELOPED BY METHODS OF ART-COMPOSITION.

Rhythm as a Form of Human Expression—As Manifested in External Nature—In the Action of the Nervous System, and in that of the Mind—Results of Experiments Proving Mental Rhythmical Action; Groups Formed from Series of Uniform Sounds—Of Sounds Regularly Differing in Accent or in Duration—Inferences from these Experiments—Speech as Necessitating Accent and Groups of Syllables—Larger Groups also—Inhalation as Necessitating Pauses, and Causing Composite Groups—Adaptation of these Conditions to Secure Rhythmic Effects of Unity and Variety, through Order—Complexity, Confusion, Counteraction, Comparison, Contrast, and Complement—Principality and Subordination—Congruity, Incongruity, and Comprehensiveness—The Number of Syllables not the Basis of the Measure-Units—Nor Quantity—But Accent—Influence of Central-Point, Setting, Parallelism, Organic Form, Symmetry—Measures Constructed According to Accent—Others—Primitive Method of Verse-Rhythm—Greek and Latin Verse-Rhythm—English and its Advantages.

ART did not originate rhythm nor the satisfaction derivable from it. Long before the time of the first artists, men had had practical experience of its pleasures. Long before the age of poetry, or music, or dancing, or even of fences or schoolboys, the primitive man had sat upon a log and kicked with his heels, producing a rhythm as perfect, in its way, as that of his posterity of the present who in Africa take delight in stamping their feet and clapping their hands, and in America in playing upon

drums and tambourines, in order to keep time to the movements of dancers and the tunes of singers.

When we come to ask why rhythm should be produced thus, either by itself or in connection with poetry or music, in short, why it should be, as seems to be the case, a natural mode of expression, we cannot avoid having it suggested, at once, that it corresponds to a method characterizing all natural movement whatever, whether appealing to the eye or ear, or whether produced by a human being or perceived in external nature. There is rhythm in the beating of our pulses, in the alternate lifting and falling of our chests while breathing, in our accenting and leaving unaccented the syllables of our speech, in our pausing for breath between consecutive phrases, and in our balancing from side to side and pushing forward one leg or one arm and then another, while walking. There is rhythm in the manifestations of all the life about us, in the flapping of the wings of the bird, in the changing phases of its song, even in the minutest trills that make up its melody, and in the throbbings of its throat to utter them; in the rising and falling of the sounds of the wind too, and in the swaying to and fro of the trees to produce these; as well as in the flow and ebb of the surf on the seashore and in the jarring of the thunder and the zigzag course of the lightning. In fact, rhythm seems to be almost as intimately associated with everything that a man can see or hear, as is the beating of his own heart with his own life. Even the stars, like the rockets that we send toward them, speed onward in paths that return upon themselves, and the phrase, "music of the spheres" is a logical as well as a poetical result of an endeavor to classify the grandest of all movements in accordance with a method which is conceived to

be universal. No wonder then that men should feel the use of rhythm to be appropriate in art-products modelled upon natural products. No wonder that, connected as it is with natural movement and life and the enjoyment inseparably associated with life, it should seem to the civilized to be—what certainly it seems to the uncivilized—an artistic end in itself.

Nor is this view of it suggested as a result merely of superficial observation. It is substantiated by the more searching experiments of the scientists. There have been discovered, for instance, in addition to the regular beat of the heart, and independent of it, rhythmical contractions and expansions of the walls of the arteries, increasing and decreasing at regular intervals the supply of blood. Such processes, which, according to Foster in his "Physiology," page 307, may be observed in the arteries of a frog's foot or a rabbit's ear, may be checked by cutting the nerves connecting it and the vaso-motor system; and this fact is taken to indicate that there is a rhythmic form of activity in the nerve-centres themselves. Regular periodic contractions have been observed, too, in the hearts of certain animals after being removed from the body; and this fact has been attributed to the presence in them of nerve-ganglia, acting according to some characteristic method. Movements of the same kind are mentioned, also, by Isaac Ott in his "Observations upon the Physiology of the Spinal Cord," in "Studies from the Biological Laboratory of Johns Hopkins University," No. II., as taking place in certain parts of the bodies of dogs, cats, and rabbits after the severing of the spinal cord; the centres for which movements he found to be in this cord, about the level of the sixth and seventh lumbar vertebræ in rabbits, and of the fifth lumbar vertebra in dogs.

Such facts with reference to the rhythmical character of nerve-action seem to indicate a possibility of the same in mental action. Acting upon this suggestion, Dr. Thaddeus L. Bolton, Demonstrator and Fellow in Clark University, conducted a year or two ago a series of very interesting experiments, which are described by him in a thesis on "Rhythm"[1] published in "The American Journal of Psychology," Vol. VI., No. 2. "The first and most important object" of these experiments are said to have been to determine "what the mind did with a series of simple auditory impressions, in which there was absolutely no change of intensity, pitch, quality, or time-interval," each separate impression being "indistinguishable from any or all the others."

After an account of the apparatus producing the clicks, and also of the individual experiences of the persons listening to them, Dr. Bolton reaches the following conclusions. Of fifty subjects, only two failed to divide the clicks into groups. Of twenty-one, whose experiences are tabulated, sixteen, when the clicks were separated by an average interval of .795, calculated in thousands of seconds, formed groups of twos. When the average intervals were .526, six formed groups of twos with a tendency to form groups of fours. When it was .542, five formed groups of fours with a tendency to divide them into groups of twos. When it was .307, all twenty-one formed groups of fours. When it was .188, twelve formed groups of fours tending to groups of eights. When it was .134, seven formed groups of eights, tending to divide into two groups of

[1] The author wishes to express his indebtedness to President G. Stanley Hall, Ph.D., LL.D., for calling his attention to the results of these experiments, and for sending him the thesis in the form in which it was printed in accordance with the requirements for the university degree of Doctor of Philosophy.

fours. When it was .145, six formed groups of eights. When it was .125, three formed groups of eights tending to double this number. When it was .460, seven formed groups of threes. When it was .149, six formed groups of threes, tending to groups of sixes. When it was .161, two formed groups of sixes, tending to divide into two groups of threes. When it was .169, seven formed groups of sixes. When it was .137, three formed groups of sixes tending to double that number. When it was .127, six noticed no grouping, but periodic intensive changes in the general effect, and when it was .156, two formed no groups.

Again, in a case in which the first of groups of sixes was accented, when the average interval was .323, one out of three subjects grouped by fours in spite of the accent. When it was .263, another had a tendency to do the same, and this accent did not convey a pleasant impression to any of them until the average intervals was .167 or .137. At the former rate the six clicks were divided by one listener into two groups of threes, and at the latter rate by both the other listeners into three groups of twos.

In a case in which the first of groups of eights was accented, none formed groups of threes or sixes; but three out of five formed groups of fours, when the average interval was .268; and when it was .116, all formed groups of eights, and found them pleasant, though with one listener there was a tendency to divide this into sub-groups of fours. In all cases "the five-group," *i. e.*, groups of fives, "was very difficult to suggest and maintain." As a rule, however, it was found that "any regular recurrent impression which is different from the rest"—either by way of accent or of duration—"subordinates the other impressions to it in such a way that they fall together into groups. If the recurrent difference is one of intensity

(*i. e.*, of accent), the strongest impression comes first in the grouping and the weaker ones after. If the recurrent difference is one of duration, the longer impression comes last,"—an inference drawn from the fact that "all the subjects found great difficulty in not making a pause after the long sound which compelled them to begin the group with the short sound." These two results taken together show that when accent is made the basis of poetical or metrical rhythm, then the first syllable or note of a series —*i. e.*, of a foot or measure—seems the most prominent, and that when duration or quantity is made the basis, then the last syllable or note seems so. In this latter case, as Dr. Bolton says, "the most natural foot must be either iambic or anapæstic" (see Chapter III.). Or, to make a different application of the principle, the most natural ending of a line of verse, which ending the voice almost instinctively prolongs, is the one which is most common in both our rhymed and blank verse,—namely, a single accented syllable.

Without, at present, considering any further the results of these experiments, let us notice that we should have a right to infer that series of sounds, in case of slow movement, would be grouped by twos or threes; but in case of more rapid movement, that they would be grouped by fours or sixes or eights or more; yet always with a tendency to divide the fours into twos, the sixes into twos or threes, the eights into twos or fours, etc.; and that this tendency would become a certainty in case every second or third sound were either accented or prolonged more than were the others.

With such facts in mind, let us turn to speech. This we find composed of syllables each uttered with an individual stress, which separates it from other syllables;

but, more than this, we find that every second or third syllable is apt to be accented, and, largely because accented, is apt to be prolonged more than are the other syllables. The reason for the accent is physiological. The vocalized breath flows through the throat—as water through the neck of a bottle—with what may be termed alternate active and passive movements. The former of these movements is that which in every second, third, fourth, or fifth syllable, produces the accent. In our language all words of more than one syllable have come to have an accent that is fixed—as distinguished from variable, which may be affirmed of words in the French; and all our monosyllabic articles, prepositions, and conjunctions are unaccented, unless the sense very clearly demands a different treatment. These two facts enable one to arrange any number of our words so that the fixed accents shall fall, as natural utterance demands that it should, on every second, third, fourth or fifth syllable.

Words, however, are not uttered slowly but rapidly. It follows, therefore, that while, because of the physiological necessity of accent, there must be these small groups of two or three syllables, the movement is rapid enough for other groups of four, six, eight, and even more syllables, of which these smaller groups of twos or threes can form subdivisions.

Now, with this fact also in mind, let us turn to speech again. Here we find that certain smaller groups composed of combined accented and unaccented syllables are themselves combined into larger groups, which are separated from other larger groups of the same composite character by the necessity experienced of pausing at certain intervals in order to draw in the breath. In the thesis upon "Rhythm" that has been mentioned, a correspondence

is suggested, though not indisputably proved, between the time occupied by these larger groups in a rate of movement declared by the listeners to be pleasing, and the length of their respirations. But whatever may be true when listening to sounds, there is no doubt about the influence of respiration when uttering them. Whenever it is necessary to pause, in order to breathe, one series of groups must necessarily be separated from another.

Nature, therefore, furnishes speech with two characteristics,—accents after every two, three, four, or five syllables, and pauses after every four, six, eight, nine, ten, twelve, or more syllables. Those who have read the former volumes of this series are now asked to recall what was said in "The Genesis of Art-Form," and is represented in the chart on page 3, with reference to the necessity universally experienced by the mind of conceiving of effects—so as to have a clear apprehension of them—as a *unity;* also with reference to the fact that the first result of an effort to organize into a unity the disorganized conditions of nature as we find it, is in the direction of *order.* Upon recalling these statements, it will be recognized how entirely they are confirmed by the results of the experiments that we have just been considering. What is the mind trying to do in putting the clicks together in twos, threes, fours, etc., but trying to make a unity of several of them? And when it invariably puts one that is prolonged or accented after or before another that is not, what is it doing but securing an effect of *unity* through making use of a certain *order* of recurrence.

Moreover, it was shown in "The Genesis of Art-Form" that while the mind experiences a necessity of conceiving of effects as a unity, the materials actually presented to

it in nature, out of which it must form this unity, invariably manifest more or less *variety*, and that their possession of characteristics some of which, being alike, tend to unity, and some of which, being unlike, do not, causes the combined result to have an effect of *complexity*. It is not necessary to point out how much greater than in the case of clicks is the extent in which both variety and complexity characterize the syllables with which the mind must deal when trying to reduce to unity the elements entering into poetic rhythm. Nor—to apply to the development of rhythm the art-methods in the order in which they are given on page 3—is it necessary to show how much more care must be expended upon securing *order* among syllables, in view of the tendency to *confusion* invariably attendant upon the fact that some are long and some short, some accented and some unaccented; nor does it need to be argued that this tendency can be *counteracted* only by a method of *grouping* the syllables, making long ones, for instance, invariably precede short ones, or accented ones precede unaccented ones; nor that the grouping to be effective in securing a general result of unity, must be made in accordance with the principle of *comparison, i. e.*, of putting like with like,—a principle which in science, as shown in "The Genesis of Art-Form," leads to classification, and in art to the analogous results of composition. In putting like with like, in this case, moreover, notice that each of the like groups, contains, as a rule, two opposing kinds of factors—long syllables and short syllables, or else accented syllables and unaccented. Each group therefore furnishes an example of *contrast* as well as of *comparison*, and because the two contrasting features in it make up a single group, these may be said also to *complement* each other (see page 3).

Now, in order to unfold our subject logically, let us go back for a little, and ask what the mind, when it first attempts to make rhythm out of speech, will most naturally select as the basis of comparison in the groups? Will it be the number of syllables composing them? or the length of these syllables? or the accents, and the intervals of time between them? Evidently for successful grouping one of these elements must be given what on page 3 is termed *principality*, and the others must be given *subordination.*

It seems evident that, starting with speech as it is, and trying to make it rhythmical, the first tendency will not be to make the numbers of syllables composing groups the basis of comparison. It was shown in Chapter VIII. of "The Genesis of Art-Form" that comparison is practically applied to results, first, by way of *congruity*, and afterwards by way of *repetition* and *consonance;* moreover, that congruity causes objects—whether sounds or sight—to be grouped because they are representative of like sentiments. As applied to language, for instance, weighty, grave, and dignified conceptions, as shown in Chapter IV. of "Poetry as a Representative Art," would require slow movement, whereas light, gay, and trifling conceptions would require rapid movement. But merely to fulfil such requirements would, evidently, necessitate no great uniformity in the numbers of syllables in the groups. As in ordinary prose, groups of one, two, or three syllables would continue equally to be representative of the same general sentiment; or else, if they did not, in case the sentiment should change, as it frequently does, congruity itself would lead to a change in these numbers. This is a somewhat scientific way of saying that, when we are using words with main reference to the thought to be expressed, as is

always the case when we *begin* to use rhythm, we do not put them into measures containing absolutely or approximately the same numbers of syllables. In rhythmical prose, for instance, the general effect is *congruous*; but the measures are usually so lacking in uniformity that to a poetic purist they seem to exemplify *incongruity* of form, and, taken together, to manifest what on page 3 is termed *comprehensiveness* of form.

For the same reason that, when we begin to construct rhythm out of ordinary speech, we do not make the numbers of syllables in the groups the basis of rhythm, we do not make the quantity of syllables its basis. To arrange speech in measures uniformly containing long or short syllables necessitates as late an artistic development as to arrange it in measures uniformly containing few or many.

Only one feature now remains unconsidered to which early attempts to render speech rhythmical can give what has been termed *principality*. This feature is accent. But notice that accent thus used has a tendency to form the larger rhythmic groups, such as are developed into poetic lines, before it forms the smaller ones, such as are developed into measures. The effect of each accent is that of one click, and, no matter whether one or many unaccented syllables come between the accented ones, a certain number of the latter, so long as all are separated by like intervals of time, constitute one group such as forms one line of verse. Later, however, but only later, it is perceived that the effect of each syllable too is that of one click, and that, by attaching a certain fixed number of unaccented syllables to each accented one, smaller groups can be formed, such as constitute poetic measures. That this is the natural order of development of the ten-

dencies that lead to lines and measures, can be confirmed by the slightest observation of ordinary talking and reciting. In these we always find an inclination to introduce the accented syllables with approximate regularity. This inclination needs only a little artistic development, and they can be introduced with absolute regularity. When this has been done, the form seems made up of equal parts determined by the emphasized syllables. Notice that the only requirement necessary for a rhythmical reading of the verses on page 20, is to separate the accented syllables by like intervals of time. The one syllable "Break," for instance, must be read in the same time as "On thy cold"; and the three syllables "Break, break, break," in the same time as the seven syllables in the line following them. In other words, to describe this method of reading according to the phraseology used in the chart on page 3, it is necessary to give *principality* to the accented syllable, and through it to the element of like intervals of time, and to give *subordination* to the intervening unaccented syllables. When this is done, moreover, notice that it is necessarily done in such a way that the accented and unaccented syllables seem to *balance* each other.

Notice also that the giving of principality to accent *concentrates* attention upon this as the important consideration, in accordance with the method termed in the chart *central point;* also that the unaccented syllables, many or few, following the accented appear to be only a *setting* accompanying them; and, in addition to this, that the accented and unaccented syllables of each foot as well as of the whole lines compared each to each, sustain relations that can be described as those of *parallelism.* Reading the verses as indicated, we shall perceive also that, as a whole, they produce, as related more particularly to

comparison, the effect of *organic form* and as related to *congruity*, the effect of *symmetry*, concerning all which methods, consult "The Genesis of Art-Form," Chapters X and XI.

It is worth while to observe, too, that any purist, ancient or modern, insisting upon the necessity in poetry of having a certain number of syllables in either a measure or a line, or upon having an accent upon a certain one or another of these syllables, would have great difficulty in proving in what sense his law could be carried out in this kind of verse. Notice, however, that the explanations of all these apparent departures from rules are simple enough, when we get under the rules to the principles which they exemplify.

Bréak, bréak, bréak,
On thy cóld gray stónes, oh séa.
And I woúld that my tóngue could útter
The thóughts that aríse in mé.

Break, Break, Break—Tennyson.

Similar principles are evidently carried out in the following, every alternate line of which contains, as a rule, the same number of accents.

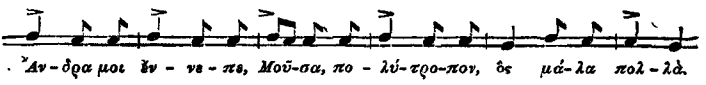
Four	accents	Day after day, day after day,
Three	"	We struck, nor breath nor motion,
Four	"	As idle as a painted ship
Three	"	Upon a painted ocean.
Four	"	Water, water, everywhere,
Three	"	And all the boards did shrink ;
Four	"	Water, water, everywhere,
Three	"	Nor any drop to drink.
Four	"	I closed my lids and kept them close,
Three	"	Till the balls like pulses beat ;
Four	"	For the sky and the sea and the sea and the sky,
Four	"	Lay like a load on my weary eye,
Three	"	And the dead were at my feet.

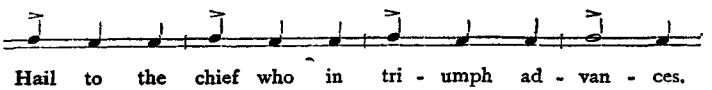
—The Ancient Mariner : Coleridge.

The kind of versification used here is sometimes spoken of as if it were originated by Coleridge. As a fact, however, when adopted by him it was not new even to English poetry, as may be recognized by comparing with it the quotation from Milton, on page 40. Nor was it new in any sense. It was merely a return to one of the oldest of forms—such, for instance, as is exemplified in Hebrew poetry—affording thus one more of many proofs that frequently a result is artistic, for the sole reason that it fulfils exactly a primary and instinctive requirement of nature.

But it may be asked, have we not derived our system of versification from that of the classic languages, and was this not based upon quantity rather than upon accent? Certainly; but, while observing these facts let us observe also that the classic system was not an elementary but a late development of rhythm. In our first chapter it was pointed out that in rhythm the influences of force and of duration are practically inseparable. Poetic measures, as we have now found, result, primarily, from force given to syllables at regular intervals of duration. But careful observation will reveal that, as a rule, the application of this force necessarily involves also an increase in the duration of the accented syllable. This increase is made in speech unconsciously; in music it is made consciously; and this was the case in the classic metres, furnishing one proof, which is confirmed by others, that they were results of an effort to intone verses—*i. e.*, to make music of them. But besides this let us notice another fact. As accent is necessarily accompanied by an increase in quantity, it is impossible that our own metres also, though determined by accent, should not manifest some traces of the influence of quantity. See what is said on page 34 of the necessity of considering this in the construction of even

English hexameters. But if our metres show some influence of quantity, the converse must be true. The Greek metres must show some influence of accent. Do they? "It is easy to see," says Dr. Schmidt, in his "Rhythmic and Metric of the Classic Languages," "that a Greek verse can and must be pronounced throughout with the prose accents, and that this can be done without any conflict arising between the prose accents and the quantity of syllables and their ictus in poetry. The following verse must, therefore, be read thus:



"Here, as it happens, the high tone and the ictus coincide in the first measures, but not in the fifth and sixth. But in English, as before remarked, the high tone is almost always joined to the ictus. . . . The following verse is accented in reading as follows:

It is true that in constructing verse the Greeks and Romans subordinated accent to quantity. Unlike ourselves, if in composing they came to a word in which long quantity and the ordinary accent did not go together, they seem always to have been at liberty to disregard the accent, and occasionally, too, they could change the quantity. In fact, they could change both quantity and accent in order to produce a rhythmic effect when chanting, analogous to that which we produce when reading. In

serious poetry, it was lawful for them to produce results not wholly unlike that in the third rhyme of the following, the classic quality of which some of us hitherto may not have recognized:

> For he might have been a Roosian,
> A French, or Turk, or Proosian,
> Or perhaps I-tal-i-an.
> But in spite of all temptations
> To belong to other nations,
> He remains an Englishman.
>
> —*Pinafore: Gilbert.*

Our poets, on the contrary, have gone back to the primitive methods, antedating those of Greece, and base the rhythms of their verse on the accents of speech. The result, as compared with the language of our prose, is more natural than that reached by the other method; and in its way is fully as artistic. Nor, in other regards, is English inferior to the classic tongues in its capabilities for artistic treatment. Owing to an extensive use of terminations in nouns, articles, pronouns, adjectives, and verbs, in order to indicate different grammatical relationships, the Greeks and Romans could change the order of words in a sentence without changing its meaning. In their language, "The dog ate the wolf," with slightly varied terminations, could read, "The wolf ate the dog." For this reason, they could alter their phraseology, in order to accommodate it to the requirements of metre, as is not possible for us; and so far they had an advantage over us. Nevertheless, for some reason, when they came to put their words into verse, as every schoolboy who tries to scan knows, they produced a language which, like the present French poetic diction, sounded unlike

that of conversation. Even supposing, with some scholars, that in reading they did not scan their verses as we do now, nor even chant them invariably, as some infer was the case, their poetic language was not the same as their spoken language. Aristotle tells us, when mentioning things which it is legitimate for the poet to do, that he can invent new words, that he can expand old ones, either by lengthening vowels or by adding syllables, that he can contract them by shortening vowels or omitting syllables, and that he can alter them in various other ways. Spenser and others since him have applied similar methods to English poetic diction; but, at present, such changes, except in rare instances, are not considered admissible, and this because they are recognized to be unnecessary. The fact that they are not admissible in our language, and were admissible in the classic languages, proves that, in one regard at least, our language is superior to them as a medium of metre. The following is a typical English stanza. In it there are no changes from ordinary prose in the arrangement, spelling, or punctuation of any of the words:

> He will hold thee, when his passion shall have spent its novel force,
> Something better than his dog, a little dearer than his horse.
> —*Locksley Hall : Tennyson.*

In this chapter we have been considering rhythm as related to certain general underlying principles, an acquaintance with which, as has been intimated, is all that is absolutely necessary for either reading or writing poetry. But, for a full understanding of the subject, the formal systems of metre and versification into which, in our language as in others, these principles have been developed, ought also to be examined. This will be done in the chapters following.

CHAPTER III.

ART-METHODS AS DEVELOPING MEASURE AND VERSE.

The Art Methods, especially Repetition, as Causing Groups of Syllables in Measures—Double and Triple Measures—Initial, Terminal, Median, Compound, and Double Initial and Terminal—Significance of Each Measure—Art-Methods as Causing Groups of Measures in Lines—Hebrew Parallelism, and Greek—The Couplet—The Cæsura—Lines of One, Two, Three, Four, Five, Six, and More Measures—Examples of Them—The Iambic Tetrameter—The Iambic Pentameter, Heroic Measure, Blank Verse—The Classic Hexameter—English Hexameter—Children of the Lord's Supper—Another Example—A Translation from the Iliad—The Alexandrine.

IT will be noticed that, according to the chart on page 3, the methods already mentioned are all those that are absolutely necessary for the production of *rhythm*, the methods further developed from these being more particularly connected with *harmony*. At the same time, even these latter methods are only more subtle manifestations of the former, and certain traces of them are apparent even in rhythm. This is especially true of *repetition*, and the methods immediately connected with it. The artistic tendency to comparison needs only to be intensified, as applied to the form, and it will cause accented syllables in all cases to be separated by exactly the same number of unaccented syllables; and will also cause exactly the same number of both accents and syllables to be placed in each line. When this has been done,—even before it has been done as we have noticed in the poetry

already quoted—each accented syllable, together with one or more unaccented, seems to constitute one group; and a certain number of these groups to constitute one line. As a result, the line can be regularly measured by the number of the groups into which it is divided. For this reason they are termed *measures*, and, owing to a supposed correspondence of movement between the use of one measure after another, and that of the feet in walking, they are also termed *feet*.

In general, we may divide all possible measures into two classes, namely, those that are double and those that are triple. The first are made up of feet of two syllables, every other of which is accented, *e. g.*:

When the | hours of | day are | numbered.

It also includes feet of four syllables, only one of which receives a strong accent; though the second from it may receive a subordinate accent. The general effect, therefore, of this measure, which is sometimes termed quadruple, is that of a doubled double measure, *e. g.*:

Roses are in | blossom and the | rills are filled with | water-cresses.

Triple measures contain three syllables, *e. g.*:

Cannon to | right of them, | cannon to | left of them.

But besides being distinguished from one another by the number of syllables composing them, measures differ according to the syllable in them—whether the first, second, third, or fourth—that receives the accent. This method of difference in connection with the other just noticed leads us to find six, or, in case we consider the quadruple measures other than modifications of the

double, eight kinds of measures (see page 103). Here they are with names indicative of the methods of forming them, in connection with which are given also the terms of Greek origin ordinarily assigned to them. But as these terms apply to arrangements of quantity rather than of accent, they frequently fail to describe accurately the English measures. Hence the use here of the new terms.

Initial or initial double measure is accented on the first syllable, and corresponds, if composed of one long syllable followed by one short, to the Greek trochee or choree; if of two long, to the Greek spondee.

Whèn the | hòurs of | dày are | nùmbered.

Terminal or terminal double measure is accented on the second syllable, and corresponds, if composed of one short followed by one long syllable, to the Greek iambus.

Amòng | thy fàn | cies, tèll | me thìs.

Initial triple measure, if composed of one long followed by two short syllables, is the same as the Greek dactyl.

Òut of the | cìties and | ìnto the | vìllages.

Median or medial triple measure, *i. e.*, triple measure with the accent on the middle syllable, if composed of one short, one long, and one short syllable, is the same as the Greek amphibrach.

There cȁme to | the bèach a | poor èxile | of Èrin.

Terminal triple measure, if composed of two short syllables followed by a long one, is the same as the Greek anapæst.

If our lànd | lord supplỳ | us with bèef | and with fish.

Compound or compound triple measure is accented on the first and third syllables, ånd, if composed of one long, one short, and one long syllable, is the same as the Greek amphimacrus.

Nèarer mỳ | Gòd to thèe | È'en tho' ìt | bè a cròss.

Initial quadruple, double initial, or di-initial measure is a form, as already said, of double measure, and is usually the same as the Greek ditrochee, *e. g.*:

Ròses àre in | blòssom ànd the | rìlls are filled with | wàter-crèsses.

Terminal quadruple, double terminal or di-terminal measure is another form of double measure, and is usually the same as the Greek diiambus, *e. g.*:

The kìng has còme | to màrshal ùs.

In "Poetry as a Representative Art," Chap. VI., the sentiments which each of these measures is fitted to represent are pointed out by showing the analogy between it and a corresponding elocutionary method of expression. There is no necessity of repeating here what is fully expressed there. Nor is it necessarily connected with those questions concerning form which we are now considering.

We have found that rhythm, besides being determined by the difference between accented and unaccented syllables, necessitated by the flow of the breath through the larynx, is also determined by the difference between exhaling and inhaling the breath; and that, as the first requirement leads to the grouping of syllables in measures, the second leads to the grouping of measures, or rather, primarily, of the accents determining the measures, into lines. Of course, no one supposes that those who originated lines had any conception of their having any

connection with the necessity of stopping in order to breathe. Art is a development of natural tendencies, of which we are not always conscious. As a rule, it is only after science has brought these to light that they are recognized as sustaining the relationship, which they do, to the forms in which they have developed. There is no doubt, however, about the relationship in this case. Indeed, Aristotle, in his "Rhetoric," hints at the same cause as underlying our modern divisions in prose, for he says that the period must be divided into clauses, easily pronounced at a breath, *εἶ ἀνάπνευστος*.

It is evident that to even an unconscious application of a principle such as this, we need only add the artistic tendency toward comparison, as manifested in putting like with like, and it will lead to that which some have supposed to be the earliest known form resembling versification, namely, the parallelism used by the Hebrews. This is so called because it contained two like or parallel statements of like or approximate length, as in the following:

> The heavens declare the glory of God,
> And the firmament showeth his handiwork.
>
> Day unto day uttereth speech,
> And night unto night showeth knowledge.
>
> Their line is gone out through all the earth,
> And their words to the end of the world.
>
> —Ps. xix., 1, 2, 4.

We find a similar arrangement in the early Greek recitative poetry, "which," says Schmidt, in Chap. XXVIII, of his "Rhythmic and Metric of the Classic Languages," "consists of two sentences which either have equal lengths, or the second of which is catalectic or falling," *i. e.*, shorter by a single syllable, "or is even shorter by an entire measure."

The connection between this form of parallelism and the artistic method of the same name in the chart on page 3, will be immediately recognized. Equally so, will be the fact that, from the use of expressions of approximate length, the tendency to *repetition* will lead, as in the case of measures, to expressions of exactly the same length. In connection with this, it is evident that the allied tendencies, already mentioned, toward *counteraction*, *complement*, *balance*, and *parallelism* have a legitimate outlet in that wellnigh universal development from these original parallelisms which is found in the *couplet*. In this, two lines of exactly the same length end, as if for the purpose of emphasizing this fact, with the same sound. Notice most of the quotations on pages 31 and 32.

Of course poets, having begun to construct couplets of one length, would naturally, for various reasons—to satisfy a desire to manifest ingenuity, or, better, to express certain sentiments,—come to construct them of many different lengths. The length of some, too, would be too great to be pronounced in a single exhalation. In such cases a reader would have to stop and breathe near the middle of the line. This fact has led, in verses containing three or more measures, to the use of the pause that is termed the cæsura, from a Latin word meaning division. Here are lines with the cæsura indicated by a bar:

> Brought from the woods | the honeysuckle twines
> Around the porch | and seems in that trim place
> A plant no longer wild; | the cultured rose
> There blossoms, strong in health, | and will be soon
> Roof high; | the wild pink crowns the garden wall,
> And with the flowers | are intermingled stones
> Sparry and bright, | rough scatterings of the hills.
>
> —*Excursion*, 6: *Wordsworth.*

Exactly where the cæsura pause should be, depends largely upon the sense. It need not necessarily come in the middle of the line, *e. g.*:

—Death his dart
Shook, | but delayed to strike, though oft invoked.
—*Paradise Lost*, II: *Milton.*

Have found him guilty of high treason. | Much
He spoke and learnedly.
—*Henry VIII., ii.*; 1: *Shakespeare.*

To indicate the number of the measures placed in a single line, the Greeks used the terms *monometer*, meaning a line containing one measure, and *dimeter*, *trimeter*, *tetrameter*, *hexameter*, etc., meaning, respectively, a line of two, three, four, and six measures. Here are lines of each kind, in which all the measures are full or regular. For lines of the same kind shortened or lengthened by a half measure, see page 46. The first example under each head below is in initial measure, and the second in terminal. Some of the measures are double, and some triple, but, of course, could be either:

Monometer:

Trochaic, Ringing,
Swinging.
—*Beautiful Snow: J. W. Watson.*

Anapæstic, How it swells,
How it dwells.
—*The Bells: Poe.*

Dimeter:

Dactyl and trochee, Melodies thrilling
Tenderly filling
Thee with their thrilling.
—*Thread and Song: J. W. Palmer.*

Iambic At thy first sound
True hearts will bound.
—*The Great Bell Roland: R. S. Bowker.*

Trimeter:

Trochaic, Go where glory waits thee,
But when fame elates thee.
—*Go Where Glory Waits Thee. T. Moore.*

Iambic, Bell never yet was hung
Between whose lips there swung
So brave and true a tongue.
—*The Great Bell Roland: R. S. Bowker.*

Tetrameter:

Trochaic, Day of wrath, that day of burning,
All shall melt to ashes turning,
All foretold by seers discerning.
—*Dies Irae: tr. by A. Coles.*

Iambic, I hate to learn the ebb of time
From yon dull steeple's drowsy chime.
—*Lay of the Imprisoned Huntsman: Sir W. Scott.*

Pentameter:

Trochaic, Dead and gone the days we had together.
—*Past Days: Swinburne.*

Iambic, The curfew tolls the knell of parting day.
The lowing herd winds slowly o'er the lea.
—*Elegy in a Country Churchyard: Gray.*

Hexameter:

Dactyls and Spondees, Simply and solemnly now proceeded the Christian service,
Singing and prayer and at last an ardent discourse from the old man.
—*Children of the Last Supper: Longfellow.*

Iambic, Flies o'er th' unbending corn, and skims along the main.
—*Essay on Criticism : Pope.*

Heptameter :

Trochaic, Ours the lightning was that cleared the north and lit the nations.
—*Athens, an Ode : Swinburne.*

Iambic, The stranger hath thy bridle-rein,—thy master hath his gold,—
Fleet-limbed and beautiful, farewell ; thou 'rt sold, my steed, thou 'rt sold.
—*The Arab to His Favorite Steed : C. E. Norton.*

Octometer :

Trochaic, They are dying, they are dying, where the golden corn is growing ;
They are dying, they are dying, where the crowded herds are lowing.
—*Ireland : D. F. MacCarthy.*

The line of four terminal measures, or the iambic tetrameter, is supposed to be the easiest of English measures in which to write, and the use of it is very general, as, for instance, in Byron's "Mazeppa," and in Scott's "Marmion" and "Lady of the Lake."

The line of five terminal measures, or the iambic pentameter, is sometimes called the heroic measure, partly because of the supposed dignity and gravity of its effect, and partly because poets have become accustomed to use it in long compositions, as, for instance, in Dryden's and Pope's translations from Homer. In these poems the measure includes rhymes, but in a majority of cases it does not. It is the only form of English verse, too, in which rhymes are often omitted, for which reason when we

speak of English blank verse we usually mean, unless the phrase is further qualified, pentameter blank verse.

Among the Greeks and Romans the effects produced by our blank pentameter verse were produced by an hexameter invariably containing two different kinds of measures—one the spondee composed of two syllables long in quantity; and the other the dactyl, composed of one long syllable followed by two short ones. As stated in "Poetry as a Representative Art," most of the English imitators of this metre fail to reproduce its easy flow of movement. One reason for this is that our language, largely because it lacks the grammatical terminations of the classic tongues, contains fewer short syllables then they; and, in the place of the only foot of three syllables allowed in their hexameter—the dactyl, containing one long and two short syllables—our poets often used more than one long syllable. Another reason is that notwithstanding the poverty of our language in short syllables, many seem to think that the hexameter necessarily requires a large number of dactyls. But Greek and Latin lines are frequent, containing few of them, *e.g.*:

— ∪ ∪ | — — | — — | — — | — ∪ ∪ | — —

ἀρνύμενος ἥν τε ψυχὴν καὶ νόστου ἑταίρων.—Homer.

— — | — — | — — | — — | — ∪ ∪ | — —

Illi inter sese magna vi brachia tollunt—*Virgil.*

Both the causes mentioned serve to make our English hexameters slow and heavy. Besides this, most of those who write them, misled by the notion that they must crowd as many syllables as possible into their lines, are tempted to use too many words, and thus to violate another principle not of poetry only, but of rhetoric.

Take the following, for instance, from Longfellow's "Children of the Lord's Supper":

> Weeping he spake in these words: and now at the beck of the old man,
> Knee against knee, they knitted a wreath round the altar's enclosure.
> Kneeling he read them the prayers of the consecration, and softly,
> With him the children read; at the close, with tremulous accents,
> Asked he the peace of heaven, a benediction upon them.

An English verse representing accurately—what is all that is worth representing—the movement of the classic hexameter, would read more like this, which, itself, too, would read better, did it contain fewer dactyls; but to show the possibilities of our verse these have been intentionally crowded into it:

> Weeping he told them this, and they, at the villager's bidding,
> Knitting with knee to knee a wreath at the altar's railing,
> Knelt as he softly led in the prayer of the consecration.
> In it the children joined, until in a tremulous accent
> Closing the prayer he had asked for the Lord's benediction upon them.

This passage from Longfellow is a typical specimen of what is called English hexameter. Here is another (not so good), from Frothingham's translation—in many respects an admirable one—of Goethe's "Hermann and Dorothea."

> Thitherward up the new street as I hasted, a stout-timbered wagon
> Drawn by two oxen I saw, of that region the largest and strongest,
> While with vigorous step a maiden was walking beside them;
> And, a long staff in her hand, the two powerful creatures was guiding,
> Urging them now, now holding them back, with skill did she drive them.

Not until such lines have been reduced to a form more like the following, can we be prepared to debate whether or not the effects of the classic hexameter can be repro-

duced in English. Those, too, who choose to compare these lines with the original, will find this translation more literal than the last.

Now my eyes, as I made my way along the new street there,
Happened to light on a cart with a frame of the heaviest timber,
Drawn by a pair of steers of the largest breed and stoutest.
By their side was a maid, and with vigorous gait was walking,
Waving a staff in her hand, and guiding the strong pair onward.
Urging or holding them in, right skilfully did she drive them.

In these last lines, there are more spondaic verses—verses, that is, in which the fifth foot contains two syllables—than were often used in the classic hexameters. But this fact does not change the general effect of the movement. Matthew Arnold says of the following, that, "it is the one version of any part of the Iliad which in some degree reproduces for me the original effect of Homer." It is a translation from the third book made by Dr. Hawtrey of Eton College:

Clearly the rest I beheld of the dark-eyed sons of Achaia,
Known to me well are the faces of all; their names I remember.
Two, two only remain, whom I see not among the commanders,—
Castor fleet in the car,—Polydeukes brave with the cestus,—
Own dear brethren of mine,—one parent loved us as infants.
Are they not here in the host, from the shores of loved Lacedæmon?
Or though they came with the rest in ships that bound through the waters,
Dare they not enter the fight, or stand in the council of heroes,
All for fear of the shame, and the taunts my crime has awakened?

The line of six terminal measures, or the iambic hextermeter, is called the Alexandrine from a poem on Alexander the Great in which it is said to have been used. As a rule, it is only employed in odes in alternation with two lines which are trimeters (see page 56) and at the ends of the Spenserian stanzas (see page 69), but in

order to impart additional importance or dignity, it is occasionally introduced into other poems, most of the lines of which, like those of the Spenserian stanza are iambic pentameters, *e. g.*:

> Their fury falls; he skims the liquid plains,
> High on his chariot, and with loosened reins,
> Majestic moves along, and awful peace maintains.
> —*Translation of the Æneid*, I: *Dryden.*

In this chapter we have noticed how the general principles underlying rhythm develop into formal systems of metre and versification,—into measures containing just so many syllables, and into lines containing just so many measures. In the remaining chapters devoted to this subject, we shall find nature and the variety characterizing it gradually asserting themselves, more and more, until these formal systems are made, through artistic methods, to produce effects corresponding to those which were shown in Chapter II. to be due to merely natural methods of applying the underlying rhythmic principles. In other words, we shall find here a noteworthy illustration of the fact, often exemplified, that the last result reached through artistic methods is not essentially different from that which in certain circumstances antedates any study of art whatever.

CHAPTER IV.

ART-METHODS AS DEVELOPING VARIETY IN MEASURE AND LINE.

Natural Conditions Necessitating Variety—Two Ways of Introducing this into Measures—By Changing the Number of Syllables in the Measures and Lines—Examples—By Omitting Syllables Necessary to a Complete Foot—Necessity of Reading Poetry in a Way Analogous to Rendering Words in Music—Unused Possibility in English Blank Verse—Suggestions of it—An Example of it and a Criticism—Omitting Syllables at the Ends of Lines—Adding them in Rhymed Lines—In Blank Verse—Feminine and Double Endings of Lines—Examples of Regularly Metrical Lines with Syllables Omitted and Added—Changing the Numbers or the Places of Accents in the Lines—In Rhyming Verses—In Blank Verse—Example of Greater Regularity—Accent and its Absence in the Final Foot: End-stopped Lines—Run-on Lines: Weak and Light Endings—Forms of Broken Blank Verse—Shakespeare's Use of Run-on Lines.

THE conditions of natural speech are such that it is not possible, even if desirable, to arrange words so as to produce effects of *unity* without those of variety; or of *comparison* by the way of exact *repetition* (see page 3) without those of *alteration*, and even of more alteration than is needed to secure that form of *counteraction, complement*, and *balance* which we find, as has been intimated, in the *alternation* between the accented and unaccented syllables of the measure, or between lines of different lengths, or rhymes, as in the following, *e. g.*:

Two barks met on the deep mid-sea,
When calms had stilled the tide;
A few bright days of summer glee,
There found them side by side.
—*The Meeting of the Ships: Felicia Hemans*

Of introducing variety into the measures there are two principal ways: first, by changing the number of unaccented syllables or the kinds of feet in the line; and second, by changing the number of accents or the places of the accents in the line. In both cases, the line is uttered in the same relative time; and this fact constitutes the basis of unity. In addition to this, in the first case, each foot is uttered in the same time; and, in the second case, each line usually contains the same number of syllables.

The first method secures through a slightly different process the same result which we have already noticed as a development of tendencies preceding the conscious formation of any measures whatever. Notice how the few lines in the two quotations following contain alterations sufficient to introduce almost every one of the different measures that were mentioned on pages 27 and 28. The names of measures printed opposite each line, refer to only the main measures in it, or to some one measure especially worthy of attention.

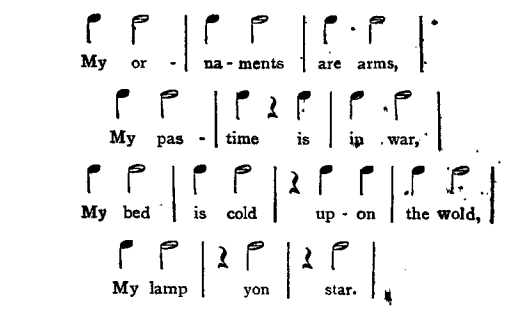
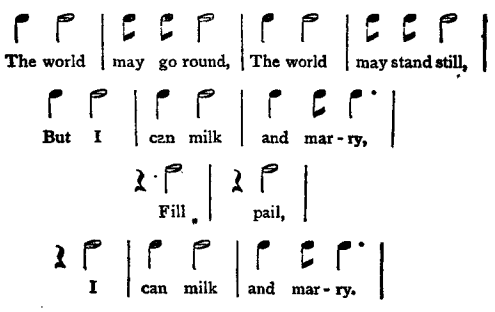
Initial	There she sees a damsel bright,
Initial Triple	Dressed in a silken robe of white.
Terminal Triple	There is not wind enough in the air
Terminal	To move away the ringlet curl
Terminal Triple	From the lovely lady's cheek.
	There is not wind enough to twirl
Terminal Triple	The one red leaf, the last of its clan,
Median Triple	That dances as often as dance it can;
Initial Triple	Hanging so light, and hanging so high,
Terminal Triple	On the topmost twig that looks up at the sky.

—*Cristabel: Coleridge*

The poets contemporaneous with Coleridge, and immediately preceding him, were too much in bondage to the supposed requirements of the classic metres to venture upon such deviations from them as are in this quotation. But long before his time, older poets had composed in the same way. Look at this:

Terminal	And let some strange mysterious dream
Initial Triple	Wave at his wings in airy stream
Terminal	Of lively portraiture displayed
Initial	Softly on my eyelids laid.
Initial Triple	And as I wake sweet music breathe
Terminal	Above, about or underneath,
Initial Triple	Sent by some spirit to mortals good,
Terminal Triple	Or the unseen genius of the wood.

—*I Penseroso : Milton.*

Still greater variety is sometimes produced, as in the "Break, break, break" of Tennyson (see page 20), by omitting some of the syllables in a line that apparently are necessary in order to render even the shortest foot complete. The reason why they can be omitted is because if the sense be such that a word must be uttered slowly, then, even though it contain but a single syllable, it may be given the same time as a foot containing two or three syllables. To illustrate what is meant, let us use musical notation. Most of us know that three quarter notes receive the same time as one half note followed by a quarter note, thus, , or by a dot, thus ; or by a quarter rest, thus, , and that two eighth notes receive the same time as one quarter note, . Now suppose that, adopting the method of music, we say that the metre of the following is composed in three-quarter time; in other words, that there are three quarter notes in each measure. Then the durations of the syllables—we are not now dealing with their accents—may be indicated thus:

—The Wandering Knight's Song: Lockhart.

—The Milkmaid's Song : Sidney Dobell

Even when all the syllables needed in order to constitute a conventional poetic foot are present, a poem, that its meaning may be clear, requires to be read in a way analogous to that in which its words could be rendered if set to music. In the following, notice the difference in effect between emphasizing or prolonging every alternate syllable as the metre requires, and slighting or giving less time to such syllables as follow the musical rests.

At | midnight, | 𝄾 in his | guarded | tent, 𝄾 | 𝄾
The | Turk 𝄾 | 𝄾 was | dreaming | 𝄾 of the | hour, 𝄾 | 𝄾
When | Greece, 𝄾 | 𝄾 her | knee in | suppliance | bent, 𝄾 | 𝄾
Should | tremble | 𝄾 at his | power ; 𝄾 | 𝄾

In | dreams, ⸗ | ⸗ through | camp and | court, he | bore ⸗ | ⸗
The | trophies | ⸗ of a | conque | ror. ⸗ | ⸗
In | dreams, his | song of | triumph | heard ; ⸗ | ⸗
Then | ⸗ ⸗ | wore his | monarch's | signet | ring, | ⸗ | ⸗
Then | ⸗ ⸗ | press'd that | monarch's | throne, ⸗ | ⸗ a | King ; ⸗ | ⸗
As | wild his | thoughts, ⸗ | ⸗ and | gay of | wing, ⸗ | ⸗
As | Eden's | garden | bird. ⸗ | ⸗
At | midnight, | ⸗ in the | forest- | shades, ⸗ | ⸗
Boz- | zaris | ranged his | Suliote | band, ⸗ | ⸗
True | ⸗ as the | steel ⸗ | ⸗ of | their ⸗ | tried ⸗ | blades, ⸗ | ⸗
Heroes | ⸗ in | heart ⸗ | ⸗ and | hand ; ⸗ | ⸗
There | ⸗ had the | Persian's | thousands | stood, ⸗ | ⸗
There | ⸗ had the | glad ⸗ | earth ⸗ | drunk their | blood ⸗ | ⸗
On | old Pla- | tæa's | day : ⸗ | ⸗
And | now ⸗ | ⸗ there | breathed that | haunted | air ⸗ | ⸗
The | sons ⸗ | ⸗ of | sires who | conquered | there, ⸗ | ⸗
With | arm to | strike ⸗ | ⸗ and | soul to | dare, ⸗ | ⸗
As | quick ⸗ | ⸗ as | far ⸗ | ⸗ as | they. ⸗

—Marco Bozzaris : Fitz-Greene Halleck.

All the examples of changes in metre given in the paragraphs preceding the last, were taken from rhyming verse. Occasionally in pentameter blank verse, too, we find an extra unaccented syllable added to a terminal or iambic foot, as in the following:

And chiefly thou oh *Spirit that* dost prefer
Before all *temples the* upright heart and pure.
—Par. Lost, I : *Milton.*

Of rebel angels, by whose aid *aspiring*
To set himself in *glory* above his peers.
—Idem.

Our English writers of blank verse, however, have recognized to only a slight extent the possibilities of metre constructed according to the principles exemplified in the above quotations from Coleridge, Milton, Lockhart, and

Dobell. Yet this form would seem to be particularly adapted to the requirements of the drama, especially of the melodrama and comedy. Notice the general effect of the following, when arranged in lines each containing three accents.

Or ever
The silver cord be loosed,
Or the golden bowl be broken;
Or the pitcher be broken at the fountain,
Or the wheel broken at the cistern.
—*Ecclesiastes, xii.*; 6.

Here, converted from some of Shakespeare's prose in "Henry V.," iii.; 6, are lines containing four accents:

Bid him therefore consider of his ransom;
Which must proportion the losses we have borne;
The subjects we have lost, the disgrace we have digested;
Which in weight to re-answer his pettiness would bow under.

And here, from the prose of Sir Walter Scott's "Kenilworth," Part II., Chapter XIV., is a consecutive conversation containing lines of three accents:

Countess of Leicester. Good friend, I pray thee begone
And leave me.

Mike Lambourne. And so I will, pretty one,
When we are tired of each other's
Company—not a jot sooner.
Nay, scream away if you like it.
I have heard the sea at the loudest,
And I mind a squalling woman
No more than a miauling kitten—
Damn me, I have heard fifty
Or a hundred screaming at once
When there was a town stormed.

Blank verse of this kind, not suggested by the author for the first time in this volume, seems to have recommended itself to Robert Bridges also, who has carried out the idea practically in what he describes as "a line of six stresses, written according to the rules of English rhythm," in which "a natural emphasizing of the sense gives the rhythm":

> At last, Chremes, it came to this: This poor young fellow,
> Continually hearing the same thing put so strongly to him,
> Gave in; he thought my age and due regard for his welfare
> Were likely to show him a wiser and a more prudent course.
> —*The Feast of Bacchus: R. Bridges.*

This passage would have been more successful, perhaps, had both the measures and the lines been shorter. When as many as four syllables come between those that are accented—an arrangement which is never allowable in ordinary verse—the ear loses the sense of form. Moreover, for reasons brought out in Chapters IV. and X. of "Poetry as a Representative Art," a long line, especially if containing long measures, usually suggests slowness of movement, which is not in congruity with the subject here presented.

The changing of the number of the syllables in the feet is very common at the ends of lines that rhyme, in which case, as will be noticed, it involves also a change in the length of the line. In the following lines, all but the accented syllable is omitted from the final measure. As a result, one line ends with an accent, and the next line begins with one. In reading, therefore, as much time is given to each single rhyming syllable as to any other two syllables. Of course, this fact serves to emphasize the rhyme, and, by doing so, to increase the effect of the verse-grouping, *e. g.*:

Hope that blessed me ; bliss that crowned
Love that left me with a wound,
Life itself, that turned around.
—Bertha in the Lane : E. B. Browning.

The same effect occurs at the end of the second line of the following :

Lives of great men all remind us
We can make our lives sublime,
And departing, leave behind us
Footprints on the sands of time.
—Psalm of Life : Longfellow.

When the lines do not begin with accents, an unaccented, in place of an accented, final syllable, has the effect of emphasizing the rhyme and the verse-form still more. This is because of the more evident pause in rhythm which the reading necessitates. In these cases, we might say that the change was produced by adding a syllable instead of omitting it, *e. g.* :

So strength first made a way.
Then beauty flowed, then wisdom, honor, *pleasure ;*
When almost all was out, God made a stay,
Perceiving that alone of all his treasure,
Rest in the bottom lay.
—The Gifts of God : Geo. Herbert.

Altho' I enter not,
Yet round about the spot
Ofttimes I *hover :*
And near the sacred gate
With longing eyes I wait
Expectant of her.
—At the Church Gate : Thackeray.

As a rule, pentameter blank verse ends with an accented syllable, but almost every long quotation from

verse of this character will reveal one or more lines like the following:

I trouble thee too much, but thou art willing.
—*Julius Cæsar*, iv., 3 : *Shakespeare.*

And here is a line ending with three syllables:

Not to relent is beastly, savage, devilish.
—*Richard III.*, i., 4 : *Idem.*

In blank verse, endings like the above, in which the extra syllables belong to the same word as the syllable on which the accent falls, are termed *feminine.* If the same effect be produced by adding a new word to the line, the ending is termed *double.* Notice the last line of the following. The first two endings are termed *masculine.*

Such harmony is in immortal souls:
But whilst this muddy vesture of decay
Doth grossly close us in we cannot hear it.
—*Merchant of Venice*, v., 1 : *Idem.*

We have already, on page 31, noticed the regular forms of monometers, dimeters, trimeters, etc. Let us now notice the forms that they assume as influenced by changes in the number of syllables in their final feet.

Monometer, less one unaccented syllable:

Bells.
—*The Bells : Poe.*

Monometer, with added unaccented syllables:

Adversity . .
With misery.
—*The Deceived Lover : Sir Thomas Wyatt.*

Dimeter, less unaccented syllables:

Drawing my breath,
Looking for death.
—*The Deceived Lover : Sir T. Wyatt.*

Dimeter, with one added unaccented syllable:

A baby was sleeping,
Its mother was weeping.
—*The Angel's Whisper : Samuel Lover.*

Trimeter, less unaccented syllables:

Go to thy rest, fair child.
Go to thy dreamless bed.
—*Go to Thy Rest : Anon.*

Trimeter, with one added unaccented syllable:

Between the dark and the daylight
When night is beginning to lower.
—*The Children's Hour : Longfellow.*

Tetrameter, less one unaccented syllable:

None that I have named as yet
Are as good as Margaret.
—*Choosing a Name : Mary Lamb.*

Tetrameter, with one added unaccented syllable:

A little in the doorway sitting
The mother plied her busy knitting.
—*A Mother's Love : T. Burbidge.*

Pentameter, less one unaccented syllable:

Lord of light, whose shrine no hands destroy.
—*Nine Years Old : Swinburne.*

Pentameter, with one added unaccented syllable:

Say one soft word, and let us part forgiven.
—*The Princess : Tennyson.*

Hexameter, less one unaccented syllable :

> High beyond the granite portal arched across.
> —*A Ballad of Sark : Swinburne.*

Hexameter, with an added unaccented syllable :

> Shall the wages of righteous-doing be less than the promise given ?
> —*Hell and Heaven : Sir Edwin Arnold.*

Heptameter, less one unaccented syllable :

> Far and wide the waste and ravin of their rule proclaim
> Change alone the changeless lord of things, alone the same.
> —*The Mill Garden : Swinburne.*

Heptameter, with one added unaccented syllable :

> We awake with a sense of a sunrise that is not a gift of the sundawn's giving,
> And a voice that salutes us is sweeter than all sounds else in the world of the living.
> —*Sunrise : Swinburne.*

Octometer, less one unaccented syllable :

> Comrades, leave me here a little while, as yet 't is early morn,
> Leave me here, and when you want me sound upon the bugle horn.
> —*Locksley Hall : Tennyson.*

The second way of introducing variety into the rhythm is by changing the *accents*,—either their numbers in the lines, or their places, while preserving as a basis of unity the same relative time in which the lines are uttered, or the same number of syllables of which they are composed. Sometimes, though not often, this method is used in rhymed lines, as in the following. Notice also how the effect of variety in the rhythm here is increased by the pauses in the reading necessitated by the sense :

The sky is changed—and such a change. O night
And storm and darkness, ye are wondrous strong,
Yet lovely in your strength, as is the light
Of a dark eye in woman! Far along
From peak to peak the rattling crags among
Leaps the live thunder. Not from one lone cloud
But every mountain now hath found a tongue,
And Jura answers, through her misty shroud,
Back to the joyous Alps who call to her aloud.

—*Childe Harold; Byron.*

It is chiefly, however, in blank verse that we find this method of securing variety. Where, as in this next quotation, as also in the sixth line of the last, these variations are determined by the thought, and the rhythm is accommodated to the requirements of sense as well as of sound, we have, for this reason, an additional excellence. See "Poetry as a Representative Art," Chap. IV.

Nine times the space that measures day and night
To mortal men, *he with his* horrid crew
Lay vanquished, *rolling in the* fiery gulf,
Confounded, though immortal: but his doom
Reserved *him to more* wrath: for now the thought
Both of lost happiness and lasting pain
Torments him: round he throws his baleful eyes
That witnessed huge affliction and dismay,
Mixed with obdurate pride and steadfast hate;
At once as far as angels ken he views
The dismal situation waste and wild;
A dungeon *horrible* on all sides round,
As one great furnace, flamed; *yet from those* flames
No light, but rather darkness visible
Served only to discover sights of woe,
Regions of sorrow, doleful shades where peace
And rest can never dwell.

—*Paradise Lost*, I: *Milton.*

Modern poets, as a rule, do not indulge in as much metrical variety of this sort as did Milton. Some, indeed,

cause the accents to fall on every other syllable with absolute regularity, depending for variety upon only the pauses that must necessarily be made in order to bring out the sense. It cannot be denied that there is a charm of its own produced by such a style, and that for young poets there is safety in it. Only a great master of rhythm like Milton could violate so many lesser laws and yet fulfil the greater ones. As a good example of a more regular style, notice the following :

> Above the garden's glowing blossom-belts,
> A columned entry shone and marble stairs,
> And great bronze valves, embossed with Tomyris
> And what she did to Cyrus after fight,
> But not fast barred : so here upon the flat
> All that long morn the lists were hammered up,
> And all that morn the heralds, to and fro,
> With message and defiance went and came.
>
> —*The Princess : Tennyson.*

There is another way of changing the number of the accents or the places of the accents in the line. It is found chiefly among dramatic writings. In all the quotations in blank verse that have been used, there has been an accent, as well as a pause required by the sense, on the final foot, as in this :

> The primal duties shine aloft like stars.
>
> —*Excursion : Wordsworth.*

A line ending thus is called technically an *end-stopped* line. A line, on the contrary, in which there is no accent on the final foot, and no pause required there by the sense, is termed a *run-on* line. Notice the first and second lines of this :

Since what I am to say must be but that
Which contradicts my accusation, and
The testimony on my part no other
But what comes from myself, it shall scarce boot me.
Winter's Tale : iii., 2 : *Shakespeare.*

Run-on lines closing with conjunctive words, like *and, as, if, nor, with,* are also termed *weak-ending*; and those closing with words like *since, while, though,* and with pronouns like *who, which, what,* and with auxiliaries like *am, has, is, would,* are termed *light-ending.*

In Shakespeare there are a large number of *run-on* lines, especially in his later works. It seems as if, instead of being regarded as forms of our ordinary pentameter blank verse, they should be regarded as forms of broken blank verse, such as we find in Goethe's "Faust." This, in reality, is what they are, though, in the English, they are not divided into lines and printed so as to show the fact. Sidney Lanier, in his "Science of English Verse," divides and prints the following lines so as to reveal their rhythm. As one object of all division of poetry into lines is to reveal rhythm, it might seem desirable always to print such verses in this way. It is to be argued against this course, however, that, were it done, the principle of putting like effects with like would not be carried out as applied to the lengths of lines.

Since what I am to say
Must be but that which contradicts my accusation,
And the testimony on my part
No other but what comes from myself
It shall scarce boot me.

Here is another set of *run-on* lines:

> Thou shalt not lack
> The flower that 's like thy face, pale primrose, nor
> The azured harebell like thy veins, no, nor
> The leaf of eglantine.
>
> —*Cimbeline*, iv., 2: *Idem.*

This, too, might be arranged thus:

> Thou shalt not lack
> The flower that 's like thy face, pale primrose,
> Nor the azured harebell like thy veins,
> No, nor the leaf of eglantine.

Shakespeare's later works, as contrasted with his earlier ones, show more maturity of thought, and in places more grandeur of style. But as he grew older he did not rewrite and rearrange his lines as carefully as previously. Had he done so, it is possible that he would have removed many of these *run-on* lines. In themselves, they are a violation of the law of the form of verse in which he was writing; and there is page after page of his poetry proving that he could have produced every desirable effect in rhythm without resorting to them.

CHAPTER V.

ART-METHODS AS DEVELOPING STANZAS AND TYPICAL VERSE-FORMS.

Rhythm as so far Explained—Necessity in Each Poem of a Standard Measure or Line—Illustrating the Art-Methods of Principality, Massing, Interspersion, Complication—Examples—Tendency to Make Long Lines just Double the Length of Short lines—The Couplet, through Complication and Continuity, Passes into the Stanza—Rhythm as Related to the Tunes of Verse, and Causing Correspondences between Lines of Verse and Lines of Vision—Rhythm as Involving Consonance, Dissonance, Interchange, and Gradation—Abruptness, Transition, and Progress—Slow and Fast Progress as Represented in Poetic Rhythm—Rhythmic Possibilities of Stanzas of Different Forms—Stanzas of Three Lines—Four—Five—Six—Seven—Shorter Chaucerian—Eight—Nine, the Spenserian—Longer Chaucerian—The Sonnet—First Type of—Second—Third—French Forms of Verse—Triolet—Rondel—Rondeau—Kyrielle—Rondeau Redouble—Ballade—Pantoum—Villanelle—Chain Verse—Sestina—Sicilian Octave—Virelai—Chant Royal—Ode—Comic Effects—Incongruity between Thought and Form—In the Form only—In Endings of Lines—In Rhymes—In Pauses.

FROM what has been said thus far, it will be perceived that rhythm is an effect produced by a consecutive series of sounds, or multiples of sounds, which, in themselves, may be varied and complex; but each series of which is of like duration. In other words, it is a result, as is everything that is artistic, of *grouping* according to some one principle—to that of time in this case—*the like partial effects of unlike complex wholes.* In poetry, as we have found, like divisions of time are measured off into

feet by accents upon certain syllables, which are usually accompanied in the same group by other syllables, and into *lines* by the same or approximate numbers of accents. As for the feet, the essential matter is that, in each group, the syllables, whether one or many, be given exactly the same amount of time. So, as a rule, with lines. To read rhythmically verses like those on page 20, the voice needs to pause a little longer after the shorter lines; doing which, it will make them appear of the same length as the longer ones. It is a method of reading, too, that any person with an ear for rhythm will adopt instinctively and unconsciously.

Notice now that, in case measures or lines be varied in character, they cannot well be read in accordance with the requirements of rhythm, unless measures and lines of some one character predominate to a sufficient extent to establish a standard by which to gauge the method of reading the whole. If, for instance, a line be intended for the time appropriate for double measures, whose two syllables are naturally uttered in a shorter time than the three of triple measures, it must convey a suggestion of this fact by being chiefly composed of double measures. Poe, in his essay on "The Rationale of Verse," says with reference to all alterations in the general structure of the verse: "The rhythm, designed, should be commenced and continued without variation, until the ear has had full time to comprehend what *is* the rhythm"—a statement which he illustrates by quoting the opening of a poem by C. P. Cranch, viz.:

> Many are the thoughts that come to me
> In my lonely musing,
> And they drift so strange and swift
> There 's no time for choosing.

In this, *many* is treated as one syllable, and *are* and *the* are treated as second and third syllables in a triple measure,—a method of treatment that would answer after the prevailing rhythm had been suggested, but not before this. Evidently in Poe's opinion the first line should read somewhat as follows:

Many thoughts, they come to me.

The general truth thus indicated reveals the necessity, in connection with *repetition* and *alteration*, for that development of *principality* which will be found, in the chart on page 3, under the name of *massing*. By this is meant the bringing together of many features of a single kind so as, through the accumulation of them, to create a single general impression. A subordinate departure from the regular movement, characterizing series of measures or lines, evidently involves the method of *interspersion* (see page 3), and, in case there be much departure of this kind, it is evident that unity can only be preserved by causing the features manifesting it to *complement* or *balance* the *principal* features by way of *complication*. As applied to measures, the quotations from Coleridge and Milton on pages 39 and 40 will sufficiently illustrate this method. As applied to lines, inasmuch as the very word *complication* means, primarily, a folding together of visible lines, its appropriateness by way of analogy to audible verses of different structure or length will be at once recognized. Here are triple measures in one line, and, in the next line, alternating with it are only double measures:

Come from my first, ay come.
  The battle dawn is nigh:
And the screaming trump and the thundering drum
  Are calling thee to die.

—*Charades, v.: W. M. Praed.*

Here are alternating lines of different lengths, but with the same measures:

Stop, mortal. Here thy brother lies,—
The poet of the poor.
His books were rivers, woods, and skies,
The meadow and the moor.
—*A Poet's Epitaph: Ebenezer Elliott.*

And here the endings of different alternate or consecutive lines give them different general effects:

Hail to the chief who in triumph advances!
Honored and blest be the evergreen Pine!
Long may the tree in his banner that glances,
Flourish the shelter and grace of our line!
Heaven send it happy dew,
Earth lend it sap anew,
Gayly to bourgeon, and broadly to grow,
While every highland glen
Sends our shout back again,
Roderigh Vich Alpine, dhu, ho! ieroe!
—*Song of Clan-Alpine: Sir. W. Scott.*

Notice, however, wherever lines of different lengths are thus used together, the almost invariable tendency that there is to make the shorter lines exactly one half the length of the longer lines. This is, evidently, only another manifestation of that which, according to the experiments in rhythm mentioned in Chapter II., led to the dividing of groups of eight clicks into groups of fours, and groups of fours into groups of twos. As illustrating this form of varying the lengths of lines, notice, besides the last two quotations, the following:

Yet the ear distinctly tells,
In the jangling
And the wrangling,
How the danger sinks and swells,
By the sinking or the swelling in the anger of the bells.
—*The Bells: Poe.*

When the grenadiers were lunging
And like hail fell the plunging
Cannon shot ;
When the files
Of the isles
From the smoky night encampment bore the banner of the rampant
Unicorn.
—*The Old Continentals : G. H. McMaster.*

Thus, notwithstanding apparent obstacles, does the artistic tendency to put like effects with like or with exact multiples of like still assert itself.

We have already noticed that the *couplet* is developed from *parallelism*. The *stanza* is manifestly a result of employing, in addition to parallelism, the methods that have just been mentioned,—*i. e.*, a result of massing forms of lines and couplets according, sometimes, to *complicated* methods ; and always in such ways as to give them certain definite limits of *continuity* (see page 3), different stanzas dividing whole poems into large groups, just as different lines divide the stanzas and different feet divide the lines. The *canto*, a larger division composed of several stanzas, is merely a result of convenience, or of logical requirement in the arrangement, and has nothing to do with effects of rhythm, *per se*.

As will be shown in Chapter XII., and therefore need not be anticipated here, the arrangement of words in measures and lines, according as these are long or short, has much to do with causing those upward and downward movements of the voice at long or short intervals, which determine the character of the tunes of verse. It is this inseparable blending of the effects of metre, verse, and tune that makes it appropriate to compare, as some are fond of doing, the movements of lines of different rhythm, in connection with their accompanying tunes,

to different kinds of lines in the arts of sight. Double measures, for instance, in which the unaccented syllable is long, especially if this be a single monosyllabic word, which itself, might, if rightly situated, receive an accent, may be said to cause a monotonous movement, resembling that of a straightly drawn or only slightly waving line. Notice this effect in the first quotation on page 60. Double measures, however, in which the unaccented syllable is short, may be said to cause a direct upward and downward movement resembling that of a sharply drawn angular and zigzag line. Notice the second quotation on page 60. Triple measures, on the other hand, in which the voice on the first syllable following the accented one is neither so high as on the accent, nor so low as on the second syllable following the accent, may be said to cause a gradation of movement, resembling that of a line curving. Notice the third quotation on page 60. As applied to groupings larger than those of measures, lines of verse, in the degree in which they are long and are also of uniform length, may be said to increase the generally monotonous and straight effect of double measures of long quantity. Notice again the first quotation on page 60. On the contrary, shortness of lines and irregularity in their length may be said to increase the angularity of effect. Notice the last two quotations on page 56, and the one on page 57. Once more, length of lines and uniformity in length may be said to increase the rounded, rolling effect of triple measures (notice on page 64 the hymns in the metres termed Elevens and Twelves); while shortness of lines, owing to the pauses at the ends of them, and especially if accompanied by occasional double measures, may be said to increase the angularity of these rounded

effects. Notice the second quotation on page 56, and the second on page 61.

These correspondences between effects in lines of verse and in lines of vision have, of course, a theoretical rather than a practical interest. More important to the logical unfolding of our subject is the fact that the necessary connection between effects of rhythm and of harmony indicated at the opening of the last paragraph involves in rhythm, for the same reasons as in harmony, a fulfilment of the methods of *consonance*, *dissonance*, and *interchange* (see page 3). Still more clearly, perhaps, does it involve *gradation*. This fact, as applied to changes of *pitch* in triple measures, was mentioned in the last paragraph. With reference to its application in all kinds of measures to changes in *force*, it may be said that certain experiments in the thesis on "Rhythm" mentioned in Chapter II. showed that where three clicks, all equally loud, formed a group, the first of the three appeared to be the louder; the second, less loud; and the last the least loud of all. In the same way, of course, poetic measures not only of two but of three syllables must involve apparent if not real gradations in intensity.

Notice also gradations in regularity, as revealed in the effects of lines in the quotation from Christabel on page 39. These lines start with double measures, then introduce more and more triple measures till, finally, all the measures become triple. More sudden changes of metre, whether in the middles of lines, or at the ends, as illustrated on page 45 involve, of course, the method of *abruptness*; while the comparative length of both measures and lines is intimately connected with the general methods of *transition* and *progress*. It is the character of the rhythm, for instance, that causes an effect of slow progress in the following:

Firm-paced and slow, a horrid front they form,
Still as the breeze, but dreadful as the storm;
Low, murmuring sounds along their banners fly,
Revenge or death,—the watchword and reply.
—*Pleasures of Hope: Campbell.*

And of rapid progress in this:

Singing through the forests;
Rattling over ridges;
Shooting under arches;
Rumbling over bridges;
—*Railroad Rhymes: J. G. Saxe.*

There is always a tendency to slow movement in measures containing vowels of long quantity, as well as in long lines made up of these measures. With any kind of quantity, however, the tendency in the direction of rapid movement is increased in the degree in which the verses contain rhymes either at the ends of lines or of half lines. As stated in "Poetry as a Representative Art," it is a characteristic of rhyming words to emphasize strongly the ideas expressed through them. They convey the impression, therefore, that something important has been said; and if they occur frequently, they suggest that many important things have been said, and said in a short time, or—what is equivalent to this—that the thought in the poem is moving on rapidly, an effect that could not be produced by the same thoughts differently worded. Of course, it follows that the nearer together the rhymes are, the more rapid seems to be the movement. Compare these two stanzas, and notice the quickening of the movement in the second of them:

The baron returned in three days' space,
And his looks were sad and sour,
And weary was his courser's pace,
As he reached his rocky tower.

My lady each night sought the lonely light
That burns on the wild Watchfold,
For from height to height the beacons bright
Of the English foemen told.

—*Eve of St. John : Scott.*

The rhythmic possibilities of different forms of stanzas, as determined by the number and length of their lines and of the feet composing these, can be best brought out by bringing together some of those in most common use, and allowing the reader to compare them. It needs to be pointed out, however, that the exact length of the stanza does not determine the character of the rhythm as much as does the general or the comparative length of the different lines composing it. This will be recognized upon reading the poetry on pages 173 and 174. Here are triplets—stanzas composed of three lines. In both examples, we have terminal or iambic measures :

Whoe'er she be
That not impossible she
That shall command my heart and me.

—*Wishes for the Supposed Mistress : R. Crashaw.*

Who rowing hard against the stream
Saw distant gates of Eden gleam,
And did not dream it was a dream.

—*Two Voices : Tennyson.*

The quatrain, or stanza of four lines, is the most common of any. Let us notice different examples of this, as used in our hymns ; and first, Short metre, as it is termed : A terminal (or iambic) trimeter, with the third line a tetrameter :

Give me, O Lord, a place
Within thy blest abode,
Among the children of thy grace,
The servants of my God.

—*Stennett.*

Common metre: A terminal (or iambic) tetrameter followed by a trimeter. This is the same as our ordinary ballad measure:

Thanks to my God for every gift
  His bounteous hands bestow;
And thanks eternal for that love
  Whence all those comforts flow.
—*Heginbotham.*

Long metre: A terminal (or iambic) tetrameter:

From all that dwell below the skies
Let the Creator's praise arise:
Let the Redeemer's name be sung,
Through every land, by every tongue.
—*Watts.*

Notice how different is the movement of the same measure when the rhymes are differently arranged:

Strong Son of God, immortal Love
  Whom we, that have not seen thy face,
  By faith and faith alone embrace,
Believing where we cannot prove.
—*In Memoriam: Tennyson.*

Sevens: So named from the number of syllables in the line; an initial (or trochaic) tetrameter less one unaccented syllable:

Whom have I on earth below?
Thee, and only Thee, I know:
Whom have I in heaven but thee?
Thou art all in all to me.
—*C. Wesley.*

Eights: A triple terminal (or anapæstic) trimeter:

Oh ! drive these dark clouds from the sky,
Thy soul-cheering presence restore ;
Or bid me soar upward on high,
Where winter and storms are no more.

—*Newton.*

Tens : A terminal (or iambic) pentameter :

Abide with me ! Fast falls the eventide,
The darkness deepens—Lord, with me abide !
When other helpers fail, and comforts flee,
Help of the helpless, oh, abide with me !

—*H. T. Lyte.*

Tens : A terminal triple and double (or anapæstic and iambic) tetrameter :

Who—who would live alway, away from his God ;
Away from yon heaven, that blissful abode,
Where the rivers of pleasure flow o'er the bright plains,
And the noontide of glory eternally reigns ?

—*Muhlenberg.*

Elevens and tens : An initial double and triple (or dactylic and trochaic) tetrameter :

Hail to the brightness of Zion's glad morning,
Long by the prophets of Israel foretold ;
Hail to the millions from bondage returning,
Gentile and Jew the blest vision behold.

—*Hastings.*

Tens and elevens : A terminal triple and double (or anapæstic and iambic) tetrameter :

Oh, worship the King all-glorious above,
And gratefully sing his wonderful love ;
Our Shield and Defender, the Ancient of days,
Pavilioned in splendor, and girded with praise.

—*Grant.*

Elevens: A terminal triple and double (or anapæstic and iambic) tetrameter:

The Lord is my shepherd, no want shall I know,
I feed in green pastures, safe-folded I rest;
He leadeth my soul where the still waters flow,
Restores me when wandering, redeems when oppressed.
—*Montgomery.*

Twelves: A terminal triple or double (anapæstic or iambic) tetrameter, with one added unaccented syllable:

Thou art gone to the grave,—we no longer deplore thee,
Though sorrows and darkness encompass the tomb;
The Saviour has passed through its portals before thee,
And the lamp of his love is thy guide through the gloom.
—*Heber.*

Here are stanzas of five lines of unequal length and character; the first with initial measures.

Hail to thee, blithe spirit,
Bird thou never wert,
That from heaven or near it,
Pourest thy full heart
In profuse strains of unpremeditated art.
—*To the Skylark: Shelley.*

These others have terminal measures:

O World! O Life! O Time,
On whose last steps I climb,
Trembling at that where I had stood before;
When will return the glory of your prime?
No more,—O nevermore!
—*A Lament: Shelley.*

O what a damp and shade
Doth me invade!
No stormy night
Could so afflict or so affright,
As thy eclipsèd light.
—*A Parodie: Geo. Herbert.*

How sweet the answer Echo makes
To music at night,
When roused by lute or horn, she wakes,
And far away o'er lawns and lakes
Goes answering light.

—*Echoes : T. Moore.*

The day is cold and dark and dreary ;
It rains and the wind is never weary ;
The vine still clings to the mouldering wall,
But at every gust the dead leaves fall,
And the day is dark and dreary.

—*The Rainy Day : Longfellow.*

Among stanzas of six lines we find many of our hymns again, *e. g.*, Eighths, sevens and fours, containing lines with four or else two initial (or trochaic) measures :

Yea, Amen ! let all adore thee,
High on thine eternal throne !
Saviour, take the power and glory ;
Make thy righteous sentence known !
Oh, come quickly,
Claim the kingdom for thine own !

—*Brydges.*

Hallelujah metre, containing lines with three terminal (or iambic) measures and four in the last couplet :

Awake, ye saints, awake !
And hail this sacred day ;
In loftiest songs of praise
Your joyful homage pay :
Come bless the day that God hath blest,
The type of heaven's eternal rest.

—*Cotterill.*

Short hallelujah metre, containing lines with three terminal (or iambic) measures, but containing four in the third, fifth, and sixth :

Thus star by star declines,
  Till all are passed away,
As morning high and higher shines,
  To pure and perfect day ;
Nor sink those stars in empty night—
They hide themselves in heaven's own light.

—*Montgomery.*

Long common metre, containing terminal (or iambic) tetrameters and trimeters :

Oh, could I speak the matchless worth,
Oh, could I sound the glories forth,
  Which in my Saviour shine !
I 'd soar, and touch the heavenly strings,
And vie with Gabriel, while he sings
  In notes almost divine.

—*Medley.*

To these let us add a few others :

Spring is cheery,
  Winter is dreary,
Green leaves hang, but the brown must fly ;
  When he 's forsaken
  Withered and shaken,
What can an old man do but die ?

—*Spring, It is Cheery : T. Hood.*

Then when the gale is sighing,
And when the leaves are dying,
  And when the song is o'er,
Oh, let us think of those
Whose lives are lost in woes,
  Whose cup of grief runs o'er.

—*Moan, Moan, Ye Dying Gales : H. Neele.*

Even as the sun with purple-color'd face
  Had ta'en his last leave of the weeping morn,
Rose-cheek'd Adonis hied him to the chase ;
  Hunting he loved, but love he laughed to scorn :
    Sick-thoughted Venus makes amain unto him,
    And like a bold-faced suitor 'gins to woo him.

—*Venus and Adonis : Shakespeare.*

Now let us notice stanzas of seven lines. The first has initial measures:

Jesus, victim, comprehending
  Love 's divine self-abnegation,
Cleanse my love in its self-spending,
  And absorb the poor libation!
Wind my thread of life up higher,
Up through angels' hands of fire!—
I aspire while I expire!—

—*Bertha in the Lane : Mrs. Browning.*

The second, a hymn in the metre called Sixes and fours, has terminal measures:

Our father's God! to thee,
Author of liberty,
  To thee we sing:
Long may our land be bright
With freedom's holy light;
Protect us by thy might,
  Great God, our King

—*S. F. Smith.*

There are certain stanzas of a definite type that ought to be noticed here. The following is one. It is called the royal rhythm, or the shorter Chaucerian. By representing each different rhyme, as is customary with writers on these subjects, by a different letter of the alphabet, the rhyme-order may be indicated thus: *a b a b b c c.*

Allas! Custance! thou hast no champiŏn
Ne fyghte canstow nought, so weylawey
But he, that starf for our redempciŏn,
And bond Sathan (and yit lyth ther he lay)
So be thy strongë champioun this day
For, but if crist open miracle kythe,
Withouten gilt thou shalt be slayn as swythe.

—*The Tale of the Man of Law : Chaucer.*

Stanzas containing eight lines are very common. Of those that are not merely a result of doubling stanzas of four lines, the more frequently used are as follows; of hymns, those in the metres called Sevens and sixes:

Rivers to the ocean run,
  Nor stay in all their course;
Fire ascending seeks the sun,
  Both speed them to their source;
So a soul that 's born of God,
  Pants to view his glorious face,
Upward tends to his abode,
  To rest in his embrace.

—*Seagrave.*

Sevens, sixes, and eights:

Saviour, Prince, enthroned above,
  Repentance to impart,
Give me, through thy dying love,
  The humble, contrite heart:
Give what I have long implored,
  A portion of thy grief unknown;
Turn, and look upon me, Lord!
  And break my heart of stone.

—*Anon.*

Eights and sevens:

Let our mutual love be fervent:
  Make us prevalent in prayer;
Let each one esteemed thy servant
  Shun the world's bewitching snare.
Break the tempter's fatal power,
  Turn the stony heart to flesh,
And begin from this good hour
  To revive thy work afresh.

—*Newton.*

Here is another stanza used by Chaucer, the rhyme-order of which is *a b a b b c b c:*

I wol biwaille, in manere of tragedie
The harm of hem that stoode in heigh degree,
And fillen so that ther was no remedie
To brynge hem out of hir adversitee ;
For certein, whan that fortune list to flee,
Ther may no man the cours of hire withholde,
Lat no man truste on blynd prosperitee ;
Be war by thise ensamples trewe and olde.

—*The Monk's Tale: Chaucer.*

Of stanzas containing nine lines, the Spenserian, so called because adopted from the Italian by Spenser, and first used in English in his "Fairie Queene" is exactly like the above, with the exception of an addition at its end of a single Alexandrine line of six measures. See page 37. The rhyme-order here is *a b a b b c b c c.*

From thence into the sacred Church he broke,
And rob'd the Chancell, and the deskes downe threw,
And Altars fouled, and blasphemy spokę,
And th' Images, for all their goodly hew,
Did cast to ground, whilest none was them to rew ;
So all confounded and disordered there :
But, seeing Calidore, away he flew,
Knowing his fatall hand by former feare ;
But he him fast pursuing soone approachèd neare.

—*Fairie Queene*, vi., 12, 25 : *Spenser.*

Owing to the number of like rhymes necessitated by this stanza, it is difficult to write with success. But it has been used by many modern poets, noticeably by Burns, in his "Cotter's Saturday Night," by Keats, in his "St. Agnes Eve," and by Byron, in his "Childe Harold," *e. g.*:

To sit on rocks, to muse o'er flood and fell,
To slowly trace the forest's shady scene,
Where things that own not man's dominion dwell,
And mortal foot hath ne'er or rarely been ;

To climb the trackless mountain all unseen,
With the wild flock, that never needs a fold;
Alone, o'er steeps and foaming falls to lean;—
This is not solitude; 't is but to hold
Converse with Nature's charms, and view her stores unrolled.
—*Childe Harold*, 2: *Byron.*

The longer Chaucerian stanza also contains nine lines. It differs from the shorter Chaucerian by the addition of the second and fifth lines, making the rhyme-order *a a b a a b b c c*, *e.g.*

The ordre of compleynt requireth skylfully,
That yf a wight shal pleyne pitously
Ther mot be cause wherfore that men pleyn,
Other, men may deme he pleyneth folely,
And causeles; alas, that am not I!
Wherefore the grounde and cause of al my peyn,
So as my troubled witte may hit ateyn,
I wol reherse, not for to have redresse,
But to declare my grounde of hevynesse.
—*The Complaint of Mars: Chaucer.*

There are no other typical stanzas that need to be considered here, aside from the typical forms of poems of which they constitute parts. The most important of these poems is not divided into stanzas at all, though it is sometimes described as a poem of one stanza. This is the *sonnet*. It is always made up of fourteen lines, of which, when it is constructed according to rule, it may be said that the first four introduce the subject or theme; that the second four develop this through introducing new material, either by way of specification, explanation, elaboration, or illustration, and that the last six make a specific or general application of the whole, with the point of all, if possible, expressed in the final line. In his "System of English Versification," Everett says of this form:

"The Sonnet, like the Spenserian stanza, was borrowed from the Italians. Petrarch is reckoned the father of it. It is still more difficult of construction than the Spenserian stanza; for, besides requiring a great number of rhymes, it demands a terseness of construction, and a point in the thought, which that does not. In the Sonnet, no line should be admitted merely for ornament, and the versification should be faultless. Sonnets, like Spenserian stanzas, are somewhat affected; and this is to be attributed to the age in which they were introduced, when far-fetched thoughts and ingenious ideas were more in vogue than simple and natural expression."

Besides Petrarch, the foremost writers of sonnets among the Italians are Dante, Michael Angelo, Tasso, Ariosto, and Vittoria Colonna; and among the English, Spenser, Shakespeare, Milton, Wordsworth, Keats, and Mrs. Browning. In Tomlinson's "Sonnet: Its Origin, Structure, and Place in Poetry," three types are indicated in accordance with which the most of the Italian sonnets were composed.

The rhyme-order of the first was *a b b a a b b a c d e c d e.* Here is an English example of this:

> Cyriack, whose grandsire on the royal bench
> Of British Themis, with no mean applause,
> Pronounced, and in his volumes taught, our laws,
> Which others at their bar so often wrench;
> To-day deep thoughts resolve with me to drench
> In mirth that, after, no repenting draws;
> Let Euclid rest, and Archimedes pause,
> And what the Swede intend, and what the French.
> To measure life learn thou betimes, and know
> Toward solid good what leads the nearest way;
> For other things mild heaven a time ordains,
> And disapproves that care, though wise in show,
> That with superfluous burden loads the day,
> And, when God sends a cheerful hour, refrains.
>
> —*To Cyriack Skinner: Milton.*

The rhyme-order of the second type was *a b b a a b b a c d c d c d; e. g.*:

A flock of sheep that leisurely pass by,
One after one; the sound of rain, and bees
Murmuring; the fall of rivers, winds and seas
Smooth fields, white sheets of water, and pure sky;
By turns have all been thought of; yet I lie
Sleepless, and soon the small birds' melodies
Must hear, first uttered from my orchard trees;
And the first cuckoo's melancholy cry.
Even thus last night, and two nights more, I lay,
And could not win thee, sleep! by any stealth:
So do not let me wear to-night away:
Without thee what is all the morning's wealth?
Come, blessed barrier between day and day,
Dear mother of fresh thoughts and joyous health.

—*To Sleep: Wordsworth.*

The rhyme-order of the third type was *a b b a a b b a c d e d c e; e. g.*:

Good Kosciusko! thy great name alone
Is a full harvest whence to reap high feeling;
It comes upon us like the glorious pealing
Of the wide spheres—an everlasting tone.
And now it tells me that in worlds unknown,
The names of heroes, burst from clouds concealing,
Are changed to harmonies forever stealing
Through cloudless blue, and round each silver throne.
It tells me too that on a happy day,
When some good spirit walks upon the earth,
Thy name with Alfred's and the great of yore,
Gently commingling gives tremendous birth
To a loud hymn that sounds far far away
To where the great God lives forevermore.

—*To Kosciusko: Keats.*

There are, however, many sonnets written in our language which resemble the Italian only in the general length and number of their lines. Neither the thought nor the rhymes are arranged as in the original. This does not prevent their being sometimes very beautiful; but it does

prevent their having the exact effect of that which they are supposed to reproduce. Here is an example of one of these:

When Letty had scarce passed her third glad year,
And her young artless words began to flow,
One day we gave the child a colored sphere
Of the wide earth that she might mark and know
By tint and outline all its sea and land.
She patted all the world; old Empires peeped
Between her baby fingers; her soft hand
Was welcome at all frontiers; how she leaped
And laughed and pratted, in her pride of bliss.
But when we turned her sweet unlearnéd eye
On our own isle, she raised a joyous cry,
"Oh yes, I see it; Letty's home is there."
And while she hid all England with a kiss,
Bright over Europe fell her golden hair.

—*Letty's Globe: Charles Tennyson Turner.*

Perhaps it is in place here to introduce specimens of some of the French Forms of Verse as they are called—not because all were originated by that people[1]; but because they are used by them. Though presenting, in the main, thought that is lighter than that in the sonnet, they are all, like it, constructed according to certain prescribed rules. These do not apply, however, to the length of the lines, which in all of them seems to be a matter of indifference. On pages 55, 56, 63, 107, and 195 of the "Genesis of Art-Form," comments will be found with reference to the arrangements both of the thought in them and of the peculiar forms of repetition characteristic of their lines

[1] Most of these forms seem to have been used by the predecessors of Gower and Chaucer, if not, as some assert, by these poets themselves. John Shirley, about 1440, made a collection of Ballades, Roundels, Virelais, etc. See Gleeson White's Introduction to "Ballades and Rondeaus."

and rhymes. Here it will suffice merely to ask the reader to note carefully their rhythmic effects. Owing to the difficulty of finding, in all cases, examples exactly fulfilling the requirements of these forms, two of the following poems are the same as those quoted in that book.

The Triolet has eight lines, the first, fourth, and seventh, and the second and last of which are the same. The rhyme order is *a b a a a b a b; e. g.*:

Easy is the Triolet
  If you really learn to make it.
Once a neat refrain you get,
Easy is the Triolet.
As you see.—I pay my debt
  With another rhyme. Deuce take it.
Easy is the Triolet,
  If you really learn to make it.

—*Triolet: W. F. Henley.*

The Rondel, a term used to distinguish the earliest form of the modifications of the same in the more modern rondeau and roundel, contains fourteen lines in three stanzas, the first, seventh, and thirteenth lines, and the second, eighth, and fourteenth of which are the same. The rhyme order—marking the refrain by capital letters—is usually *A B a b—b a A B—a b a b A B;* but sometimes it is *A B b a—a b A B—a b b a A.* The following, as will be perceived, blends both forms.

I love you dearly, O my sweet!
  Although you pass me lightly by,
  Although you weave my life awry.
And tread my heart beneath your feet.

  I tremble at your touch, I sigh
To see you passing down the street;
I love you dearly, O my sweet!
  Although you pass me lightly by.

You say in scorn that love's a cheat,
Passion a blunder, youth a lie.
I know not. Only when we meet
I long to kiss your hand and cry,
"I love you dearly, O my sweet!
Although you pass me lightly by."
—Rondel: J. H. McCarthy.

The Rondeau contains thirteen lines in three stanzas, with an unrhymed refrain at the end of the second and third stanzas, which refrain is the same as the clause with which the poem opens. The rhyme order is *a a b b a—a a b*, refrain—*a a b b a*, refrain; *e. g.*:

The summer 's gone—how did it go?
And where has gone the dogwood's show?
The air is sharp upon the hill,
And with a tinkle sharp and chill
The icy little brooklets flow.

What is it in the season, though,
Brings back the days of old, and so
Sets memory recalling still
The summer 's gone?

Why are my days so dark? for lo,
The maples with fresh glory glow,
Fair shimmering mists the valleys fill,
The keen air sets the blood a-thrill—
Ah, now that *you* are gone, I know
The summer 's gone.
September; Airs from Arcady: H. C. Bunner.

The Roundel is a modern modification of the Rondel, and contains nine lines in three stanzas, with a refrain at the end of the first and third of these. The rhyme order is *a b a* refrain—*b a b—a b a* refrain; *e.g.*:

We know not yet what life shall be,
  What shore beyond earth's shore be set;
What grief awaits us, or what glee,
    We know not yet.

Still, somewhere in sweet converse met,
  Old friends, we say, beyond death's sea
Shall meet and greet us, nor forget

Those days of yore, those years when we
  Were loved and true,—but will death let
Our eyes the longed-for vision see?
    We know not yet.
—Mors et Vita: Roundel by Samuel Waddington.

The Rondeau Redouble, by no means a double Rondeau, though so called, contains six stanzas, each of four lines. The four lines of the first stanza are used respectively for the last lines of stanzas two, three, four and five; while the last line of the sixth stanza is new, but has added to it, as a refrain, the first half of the poem's opening line. The rhyme order is *a b a b—b a b a—a b a b—b a b a—a b a b—b a b a* refrain, *e. g.*:

My day and night are in my lady's hand;
I have no other sunrise than her sight;
  For me her favor glorifies the land;
Her anger darkens all the cheerful light,

  Her face is fairer than the hawthorn white,
When all a-flower in May the hedge-rows stand;
  While she is kind, I know of no affright;
My day and night are in my lady's hand.

  All heaven in her glorious eyes is spanned;
Her smile is softer than the summer's night,
  Gladder than daybreak on the Faery strand;
I have no other sunrise than her sight.

Her silver speech is like the singing flight
Of runnels rippling o'er the jewelled sand;
Her kiss a dream of delicate delight;
For me her favor glorifies the land.

What if the Winter chase the Summer bland!
The gold sun in her hair burns ever bright.
If she be sad, straightway all joy is banned;
Her anger darkens all the cheerful light.

Come weal or woe, I am my lady's knight,
And in her service every ill withstand;
Love is my lord in all the world's despite,
And holdeth in the hollow of his hand
My day and night.

—*Rondeau Redouble: John Payne.*

The Villanelle is made up of five stanzas of three lines and one of four lines. The first line of the first stanza concludes the second and fourth stanzas, and is the third line of the sixth stanza; while the third line of the first stanza concludes the third, fifth, and last stanzas, *e. g.*:

Across the world I speak to thee;
Where'er thou art (I know not where),
Send thou a messenger to me.

I here remain who would be free,
To seek thee out through foul or fair,
Across the world I speak to thee.

Whether beneath the tropic tree,
The cooling night-wind fans thy hair,—
Send thou a messenger to me!

Whether upon the rushing sea,
A foamy track thy keel doth wear,—
Across the world I speak to thee.

Whether in yonder star thou be,
A spirit loosed in purple air,—
Send thou a messenger to me!

Hath heaven not left thee memory
Of what was well in mortal's share?
Across the world I speak to thee;
Send thou a messenger to me!
—*Across the World I Speak to Thee: Edith M. Thomas.*

The Kyrielle is made up of stanzas of four lines, each of eight syllables, the last line of each stanza being the same. The rhyme order is *a a b b—c c b b—e e b b*, etc.; *e.g.*:

A little pain, a little pleasure,
A little heaping up of treasure;
Then no more gazing upon the sun.
All things must end that have begun.

Where is the time for hope or doubt?
A puff of the wind, and life is out;
A turn of the wheel, and rest is won.
All things must end that have begun.

Golden morning and purple night,
Life that fails with the failing light;
Death is the only deathless one.
All things must end that have begun.
—*From a Kyrielle by John Payne.*

The Pantoum is made up of stanzas of four lines, the second and fourth of each stanza forming the first and third of the stanza following; while the second and fourth of the final stanza are the first and third of the first stanza. The rhyme order is *a b a b—b c b c*, etc.; *e. g.*:

Toiling in town now is horrid
  (There is that woman again !)—
June in the zenith is torrid,
  Thought gets dry in the brain.

There is that woman again ;
  " Strawberries ! fourpence a pottle ! "
Thought gets dry in the brain ;
  Ink gets dry in the bottle.

" Strawberries ! fourpence a pottle ! "
  Oh for the green of a lane !—
Ink gets dry in the bottle ;
  " Buzz " goes a fly in the pane !

—From a Pantoum, In Town, by Austin Dobson.

The wind brings up the hawthorn's breath,
  The sweet airs ripple up the lake,
My soul, my soul is sick to death,
  My heart, my heart is like to break.

The sweet airs ripple up the lake,
  I hear the thin woods' fluttering :
My heart, my heart is like to break :
  What part have I, alas ! in spring ?

I hear the thin woods' fluttering ;
  The brake is brimmed with linnet-song :
What part have I, alas ! in spring ?
  For me heart's winter is life-long.

—From a Pantoum : Song in the Malay manner by John Payne.

Here is a form of French chain verse taken from the excellent manual on " English Versification " of J. C. Parsons.

Nerve thy soul with doctrines noble,
  Noble in the walks of time,
Time that leads to an eternal,
  An eternal life sublime :

Life sublime in moral beauty,
Beauty that shall ever be;
Ever be to lure thee onward,
Onward to the fountain free.

—*Anon.*

Here is a like poem, published in 1773.

My spirit longeth for thee
Within my troubled breast,
Although I be unworthy
Of so divine a guest.

Of so divine a guest,
Unworthy though I be,
Yet has my heart no rest,
Unless it comes from thee.

Unless it comes from thee,
In vain I look around;
In all that I can see
No rest is to be found.

No rest is to be found
But in thy blessèd love
Oh, let my wish be crowned,
And send it from above.

—*John Byrom.*

The Ballade contains either three stanzas of eight lines with an Envoy of four lines, or three stanzas of ten lines with an Envoy of five lines. The rhymes must be the same, and occur in the same order in each stanza, the same rhyming syllable must not be used twice in the same poem, and the sense in each stanza must form one unbroken and connected whole. The rhyme order of the first form is *a b a b b c b c* and in the Envoy *b c b c*; in the second form it is *a b a b b c c d c d*, and in the Envoy *c c d c d*. Here is an example of the first form:

She 's had a Vassar education,
  And points with pride to her degrees;
She 's studied household decoration;
  She knows a dado from a frieze,
  And tells Corots from Boldonis;
A Jacquemart etching, or a Haden,
  A Whistler, too, perchance, might please
A frank and free young Yankee maiden.

She does not care for meditation;
  Within her bonnet are no bees;
She has a gentle animation,
  She joins in singing simple glees.
  She tries no trills, no rivalries
With Lucca (now Baronin Räden),
  With Nilsson or with Gerster; she 's
A frank and free young Yankee maiden.

I 'm blest above the whole creation,
  Far, far above all other he's;
I ask you for congratulation
  On this, the best of jubilees:
  I go with her across the seas
Unto what Poe would call an Aiden,—
  I hope no serpent 's there to tease
A frank and free young Yankee maiden.

Envoy.

Princes, to you the western breeze
  Bears many a ship, and heavy laden,
What is the best we send in these?
  A frank and free young Yankee maiden.
—An American Girl: Brander Matthews.

Here are the first stanza and the Envoy of a Ballade in the other form. The thought in this, as often in the ballade, is of a more serious character. Notice, at the beginning of the Envoy, as also of the last, the address to the Prince, in imitation of the methods of the old balladists.

My days for singing and loving are over
And stark I lie in my narrow bed,
I care not at all if roses cover
Or if above me the snow is spread;
I am weary of dreaming of my sweet dead—
Vera and Lilly and Annie and May,
And my soul is set on the present fray,
Its piercing kisses and subtle snares:
So gallants are conquered, ah wellaway,
My love was stronger and fiercer than theirs.

Envoy.

Prince was I ever of festival gay,
And time never silvered my locks with gray;
The love of your lovers is as hope that despairs,
So think of me sometimes, dear ladies, I pray,
My love was stronger and fiercer than theirs.

—*The Ballade of Lovelace: George Moore.*

The Sestina has six stanzas of six lines and a concluding stanza of three lines. The rhyme-order of the first stanza is *a b c d e f*; of the second, *f a e b d c*; of the third, *c f d a b e*; of the fourth, *e c b f a d*; of the fifth, *d e a c f b*; and of the sixth, *b d f e c a*. In the concluding three lines, all six rhymes are used, three at the middles of the lines, and three at their ends, and in this order: first line *a b*, second line *c d*, third line *e f*. The form is exceedingly artificial; and, as most of the rhymes are so far apart as to have none of their ordinary effects, there is nothing peculiar to the rhythm that deserves notice. Few modern sestinas exemplify the rhyme-order just indicated. Notice this sestina's last stanza and conclusion:

And into every mortal's life and heart
There come some time in cloudy days or fair,
It matters not, to bless and light his fate
For one short space the perfume of the rose;
And though the after years may bring but tears,
That moment's pleasure is of Paradise.

O wondrous rose of love most passing fair,
Whate'er our fate in earthly Paradise,
Grant that our tears be dewdrops in thy heart.
—*Sestina : Florence M. Byrne.*

The Sicilian Octave is a single stanza of eight lines, the rhyme-order of which is *a b a b a b a b*. Its general rhythmic effect is like that of thousands of others with which we are familiar.

The Virelai is composed of nine stanzas, each containing nine lines. In each stanza there are two different rhymes, one used six times, and the other three. The one that is used three times is used six times in the following stanza: and the rhyme used six times in the first stanza is used three more times in the last stanza. Every rhyme, therefore, is used exactly nine times. Here are the first and second stanzas of a Virelai:

As I sat sorrowing,
Love came and bade me sing
A joyous song and meet,
For see (said he) each thing
Is merry for the Spring,
And every bird doth greet
The break of blossoming,
That all the woodlands ring
Unto the young hours' feet.

Wherefore put off defeat
And rouse thee to repeat
The chimes of merles that go,
With flutings shrill and sweet,
In every green retreat,
The tune of streams that flow,
And mark the fair hours' beat,
With running ripples fleet
And breezes soft and low.
—*Spring Sadness : John Payne.*

The Chant Royal, said to be so called because those excelling in it were deemed worthy to be crowned with garlands like conquering kings, consists of five stanzas, each containing eleven lines. In the whole chant only five rhymes are used, which rhymes, not words, in every stanza are the same, and follow in the same order. This order in the stanza is *a b a b c c d d e d e*, and, in the Envoy, it is *d d e d e*, the final line being the same in each of the stanzas, and also in the Envoy. Owing to the fewness of its rhymes, this chant is exceedingly difficult to construct, and owing to its general effect, it was formerly reserved, says Prof. Gosse, from whom the following final stanza and concluding Envoy are quoted, "for the celebration of divine mysteries, or for the exploits of some heroic race."

But oh, within the heart of this great flight,
What ivory arms hold up the golden lyre?
What form is this of more than mortal height?
What matchless beauty! What inspirèd ire!
The brindled panthers know the prize they bear,
And harmonize their steps with stately care;
Bent to the morning like a living rose,
The immortal splendor of his face he shows,
And where he glances, leaf and flower and wing
Tremble with rapture, stirred in their repose,
And deathless praises to the vine-god sing.

Envoy.

Prince of the flute and ivy, all thy foes
Record the bounty that thy grace bestows
But we, thy servants, to thy glory cling;
And with no frigid lips our songs compose,
And deathless praises to the vine-god sing.

—*The Praise of Dionysius* : *E. W. Gosse.*

Most of the types of stanzas that we have considered so far are regular in form. In the Ode, as constructed by

Pindar, there were nine stanzas of different forms composed in iambics. The first, fourth, and seventh stanzas corresponded; also the second, fifth, and eighth; and the third, sixth, and ninth. Gray's "Progress of Poetry" is constructed on this plan; but rigid adherence to the Pindaric type is not, in our odes, considered essential. On the contrary, the form is chiefly valued on account of the great variety of rhythm—whether manifested in lines or stanzas—that is allowable in it. It is usually employed in the enthusiastic expression of dignified thought as in the following:

The winds come to me from the fields of sleep,
And all the earth is gay;
Land and sea
Give themselves up to jollity
And with the heart of May
Doth every beast keep holiday;
Thou Child of joy,
Shout round me, let me hear thy shouts, thou happy Shepherd-boy.
—*Ode on Intimations of Immortality: Wordsworth.*

Comic effects are sometimes attributed to the rhythm; but in many such cases they are owing less to the character of the measures, whether double or triple, initial or terminal; or to the lines, whether long or short, regular or irregular, than to the character of the words that are put into them. For instance, in the following we find the terminal tetrameters and trimeters of the Common Metre of so many of our hymns. It will be observed, however, that the words that are used in them are exceedingly easy to pronounce, and therefore, when combined with others, can be made to sound light, flippant, and rattling:

Her face was bad, her figure worse,
He could n't bear to eat;

For she was anything but like
A Grace before his meat.
—*Tim Turpin : T. Hood.*

And this is the same as our Long Metre:

Well, well, the chaplain I will seek,
We 'll all be married this day week—
At yonder church upon the hill;
It is my duty, and I will.
—*Captain Reece : W. S. Gilbert.*

When we have a combination of double and triple measures, the latter, because pronounced in the same relative time as the former, are necessarily uttered with a certain degree of rapidity. For this reason, these rattling effects are at their best where triple measures are occasionally introduced:

His eyes they were odd
Like the eyes of a cod,
And gave him the look of a watery god.
His nose was a snub,
Under which, for his grub,
Was a round open mouth like that of a chub.
—*A Flying Visit : T. Hood.*

In cases in which comic effects are really produced by the rhythm aside from the language, it seems to be a legitimate development of that incongruity which in other departments is recognized to be their most prominent component. Sometimes this incongruity is between the thought and the form, as in the following:

Strike the concertina's melancholy string!
Blow the spirit-stirring harp like anything!
Let the piano's martial blast
Rouse the echoes of the past,
For of Agib, Prince of Tartary, I sing.
—*The Story of Prince Agib : W. S. Gilbert.*

" This to thy weazand Christian pest!"
Aloud the Turk in frenzy yelled it,
And drove right through the Doctor's chest
The sabre and the hand that held it.

The blow was a decisive one,
And Doctor Brown grew deadly pasty—
" Now see the mischief that you 've done—
You Turks are so extremely hasty!"
—*Ben Allah Achmet : W. S. Gilbert.*

In other cases, however, the incongruity is distinctly in the form. Notice in the following not only the short, flippant, and rattling nature of the syllables, but the effect of a triple measure at the end of each line in a place where a congruous arrangement, such as would characterize a serious composition, would give us a double measure, followed by a firmly sustained final accent:

So I whispered, " Dear Elvira, say, what can the matter be with you?
Does anything you 've eaten, darling Popsy, disagree with you?
—*Ferdinand and Elvira : W. S. Gilbert.*

Notice the same lack of sustained force, and therefore of dignity, in the final measures of several of the lines in this:

To trace the Kilmansegg pedigree
To the very roots of the family tree,
Were a task as rash as ridiculous;
Through antediluvian mists as thick
As London fog such a line to pick
Were enough in truth to puzzle old Nick,
Not to name Sir Harris Nicholas.
—*Miss Kilmansegg and her Precious Leg : T. Hood.*

In the italicized words of the following also we expect a firmly sustained accented final measure. It is the en-

deavor to give it where it does not by nature belong that makes the effect ludicrous. Sidney Lanier, in his "Science of English Verse," attributes a comic suggestiveness to the rhythm of the lines in the first quotation below, aside from the way in which they end. So far as he is justified in doing this, it is probably owing to the blending in them of double measures with triple measures not only, but also with quadruple. Notice again what is said at the middle of page 86.

Stick close to your desks, and never go to sea,
And you all may be rulers of the queen's *navee*.
—*Pinafore : W. S. Gilbert.*

I du believe in prayer an' praise
To him—that hez the *grantin'*
O' jobs; in every thin' thet pays;
But most of all in cantin';
This doth my cup with marcies fill,
This lays all thought o' sin to rest;
I don't believe in *princerple*,
But, oh! I du in *interest*.
—*Biglow Papers : Lowell.*

Notice, too, all the rhymes in this:

A fig for their nonsense and chatter!—suffice it, her
Charms will excuse one for casting sheep's eyes at her.
When a man has decided
As Captain M'Bride did,
And once fully made up his mind on the matter, he
Can't be too prompt in unmasking his battery.
—*The Knight and the Lady; Ingoldsby Legends : R. H. Barham.*

As well as the peculiarly snappish and unexpected ending of the first, second, and fifth lines of the following, and also the incongruous rhyme of the last line:

There was a young woman named Hannah
Who slipped on a piece of banana;

She cried out "O my!"
And more stars did she spy
Than are seen in the star-spangled banner.
—*Nonsense Rhymes.*

The fun in this, too, is in the incongruity of employing for a rhyme-ending what, in a properly written line, would be given no emphasis whatever:

Whene'er with haggard eyes I view
This dungeon that I 'm rotting in,
I think of those companions true,
Who studied with me at the U-
niversity of Gottingen,
niversity of Gottingen.
—*The University of Gottingen : Geo. Canning.*

CHAPTER VI.

ART-METHODS AS DEVELOPING RHYTHM IN MUSIC.

Rhythm an End aside from its Connection with Words—Music as Developed from Song—Point of Separation between Speech and Song: Poetry and Music—Musical Measures more Complicated than Poetic—Ways of indicating Musical Notes and Rests—Measures—Longer Divisions Corresponding to Poetic Lines—Developed as in Poetry from the Art-Methods, Parallelism, etc.—The Motive—Its Expressional Importance—The Phrase, Section, and Period—Changes in the Period—Unity of Effect as Developed from these Rhythmic Arrangements—Why Higher Works Find Few to Appreciate them—Musical Measures, Like Poetic, Double and Triple—Accent in Musical Measures—Why Poetic Measures Need to be Distinguished in Other Ways than as Double and Triple—Three or Six Notes as used in the Time usually Allotted to Two or Four—Changes of the Places of Accent in the Measures—Possibility of Representing Different Effects of Movement—Typical Forms of Rhythm—General Effect of Musical Rhythm Depends on that of Whole Phrases, Sections, and Periods—Effects of Rhythm very Different from those of Harmony—But the Development of the One has Accompanied that of the Other.

VERY slight consideration of rhythm, even as used by the poets, will cause us to recognize that it possesses a charm wholly aside from that of the intelligible words arranged in accordance with its requirements. What else than the effects of the rhythm of mere sound could cause the senseless phrases of so many of "Mother Goose's Melodies" to be so popular with the children? What else than the rhythm of mere sound—the recurrence of like beats at like intervals of time—could cause the satis-

faction which those of different nations seem to derive from the noises of gongs, drums, castanets, and cymbals? What but this makes the negroes of the South and the settlers of the far West clap their hands and feet in unison, and seem to enjoy doing this, in order to provide what takes the place of music for their dancers? In the very rudest beginnings of this art therefore, even before it has passed into a form in which it can properly be termed music, it is characterized by rhythm.

In order to recognize how natural it is that rhythm should continue to characterize music after being fully developed, let us begin by recalling a few of this art's fundamental conditions. In Chapters II. and VI. of "Art in Theory," attention was directed to the fact that it is through the use of their own voices and hands that men begin to gain personal experience in that initial act of all the arts, which consists in putting together the sights or sounds of nature. Probably no one disputes this fact as applied to music. "We are justified in assuming," says Helmholtz, in Part III., Chap. XIX., of "The Sensations of Tone as a Physiological Basis for the Theory of Music," "that historically all music was developed from song. Afterwards the power of producing similar melodic effects was attained by means of other instruments which had a quality of tone compounded in a manner resembling that of the human voice."

As music starts with song, it starts with the elements of natural speech. This, as we have found, is composed of syllables differing from one another in duration, force, quality, and pitch. The moment these possible differences begin to be made for their own sakes without reference, or primary reference, to the meanings which they have in words, we are in the realm of music, which art, as

it deals with sounds rather than with their linguistic significance, tends to a far more elaborate development of them than is found in poetry. In the latter art, measures have been shown to be a result of grouping about certain syllables, in pronouncing which there is a physiological necessity for using an accent, certain other syllables that need not be accented. Owing to this necessity, as also to the fact that each syllable of speech has a definite meaning, and, therefore, must be uttered with sufficient slowness to be definitely heard not only but interpreted to understanding, poetic measures never contain more than two, three, or four separate sounds. But musical notes, even if in song, are produced by a sustained action of the larynx, which does not necessitate anything even resembling the alternating accented and unaccented utterances of speech; and, of course, the absence of the same alternation is still more marked in sounds produced upon musical instruments. Besides this, the meanings of musical sounds are not dependent, as words are, upon their individual formation, but upon their order of sequence, and, therefore, they can be produced with any amount of rapidity consistent with giving a general impression of the fact that they are present.

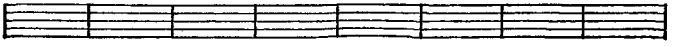
For all the reasons just given, very many more separate sounds can be used in a musical measure than in a poetic; and the manner, too, of using and arranging them can be correspondingly more complicated. Poetic rhythm, in fact, is only a very elementary form of the elaborate developments of rhythm which, when freed from the limitations of accent and etymology, we find in music. As, however, the underlying principles in all metre are the same, it is not necessary here to trace again the sources of rhythm to the artistic tendencies toward *unity*, *order*,

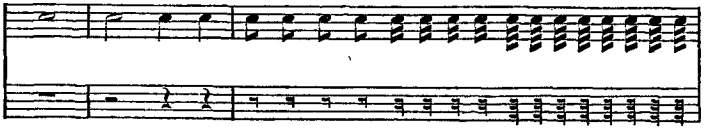
comparison, and *principality*, as modified by *variety*, *confusion*, *contrast*, and *subordination*, and manifested in the other methods of composition connected with these as arranged in the chart on page 3. As musical rhythm is a development of poetic, it will be sufficient for our purpose, with only an occasional reference to particular methods, to confine our attention to observing the differences in the factors of the two arts which determine the differences in their rhythmical manifestations.

In order to accomplish our end, let us begin by recalling—of course in the interest of those only who are ignorant of music—a few familiar facts with reference to musical notation. It may be as well to say too, in passing, that a study of the methods underlying musical rhythm is important in its bearings upon the subject of proportion, as well as in itself. But with reference to music: Its single sounds are called notes. In writing it, these are represented by characters that indicate the length of time in which they are to be sounded. The notes used at present, beginning with the longest, are the whole note 𝅝 sounded, as a rule, in the same time as two half notes 𝅗𝅥 as four quarter notes ♩, as eight eight notes ♪, as sixteen sixteenth notes 𝅘𝅥𝅯 and as thirty-two thirty-second notes 𝅘𝅥𝅰. A dot placed after a note lengthens it by just one half. For instance, a whole note dotted (𝅝.) is sounded for the same time as three half notes (𝅗𝅥 𝅗𝅥 𝅗𝅥). Corresponding to these notes in the length of time given to them, are characters called rests, indicating that the sound should cease where they are placed. These, beginning with the longest, are the whole rest 𝄻 indicating, as a rule, a pause of the same length as two half rests— as four quarter rests 𝄽, as eight eight rests 𝄾, as sixteen sixteenth rests 𝄿, and as thirty-two thirty-second rests 𝅀.

These notes and rests correspond, as will be recognized, to the syllables and undesignated slight pauses after them sometimes used in poetry, as illustrated on page 41.

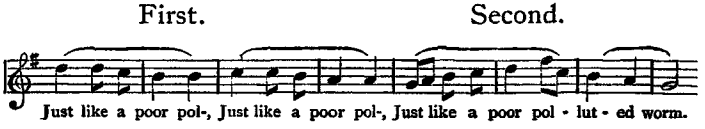
The measures in which the notation is arranged are separated by vertical lines termed bars, for which reason the measures themselves also are sometimes termed bars. Placed on the ordinary musical staff of five parallel lines indicative of pitch, the bars look thus:



The combinations of notes and rests in each successive measure are allotted the same amount of time, thus:

But besides these smaller divisions of time corresponding to poetic feet, we have in music larger divisions corresponding to poetic lines. Just as in poetry too, the lines are caused primarily by the groupings of sounds into series that can be uttered in a single exhalation, so too in music. In singing there will always be a tendency to pause just as in reading; and in singing verses, a tendency to pause in the same places as in reading them. To show this, we have only to recall any of our common hymns or songs. Notice the music printed near the beginning of Chapter XII. of this volume. The only difference between the pauses in reading this and in singing it, is that, in the latter, they are relatively longer. It is natural that such should be the case, because more breath is expended in producing singing tones than in producing reading

tones, and more time is needed in singing in order to inhale a sufficient quantity of breath.

Divisions of the kind caused by pausing to breathe when singing, are found in every form of music; but they all probably originated in a desire to make the tunes and the words of songs coincide, *i. e.*, in the same tendency that causes poetical verses consisting of clauses or sentences of like length to be placed between the necessary breathing places. Subsequently, after the custom had been established of using musical series of similar length, these continued to be factors of the form irrespective of other considerations. In modern music, pauses followed by transitions to new groups of sounds are by no means always determined by pauses in the sense and transitions to new clauses. There are absurd examples of an opposite method. Look at the following:



In poetry we have found the tendency first manifested in measures and lines developing through *parallelism* into the couplet, and through *massing*, *interspersion*, *complication*, and *continuity* into the stanza. There are corresponding developments in music. Beginning with the smallest of these, first of all after the measure, we have what is termed a *motive*. This is usually contained in two measures, but its chief function is not to divide up the time but to express or represent a phase of feeling which is a germ for future musical unfoldment. The motive bears somewhat the same relation to a musical composition as is borne to a poetic by a refrain. This refrain

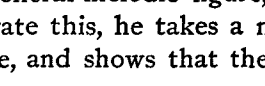
is usually short, as in the "Philip, my king," of the following, yet it might be longer, *e. g.*:

Look at me with thy large brown eyes,
Philip, my king.
For round thee the purple shadow lies
Of babyhood's royal dignities.
Lay on my neck thy tiny hand
With love's invisible sceptre laden;
I am thine Esther, to command,
Till thou shalt find thy queen-handmaiden,
Philip, my king.

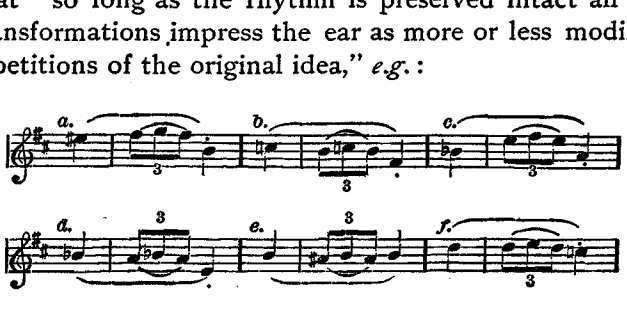
—*Philip My King: D. M. Mulock.*

"The essential value of a motive," says W. S. B. Mathews, in his "Primer of Musical Forms," "lies in its rhythm and its general melodic figure, chiefly in the former." To illustrate this, he takes a motive from Schumann's Novellette, and shows that the melody of it can

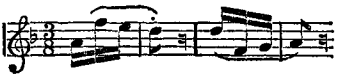
From Schumann's Novellette, Op. 99.



be transformed in a variety of ways, changing it to a different pitch in the same key or in another key, but that "so long as the rhythm is preserved intact all the transformations impress the ear as more or less modified repetitions of the original idea," *e.g.*:

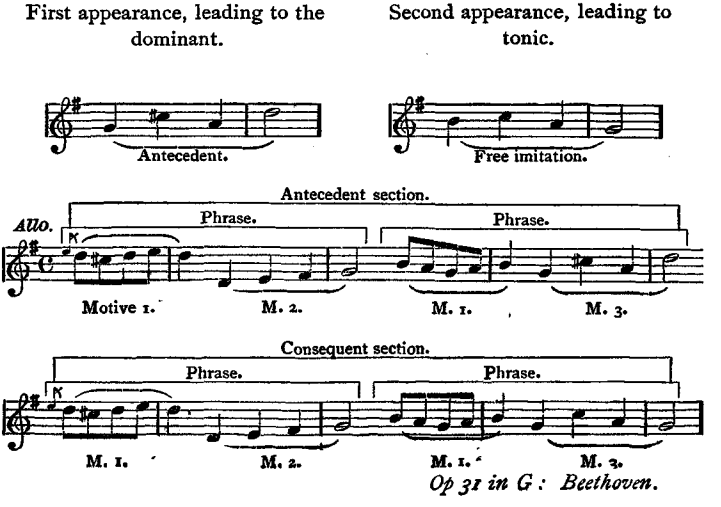


So, too, he shows that the motive can be modified with an analogous effect, by "imitation in contrary motion," thus:

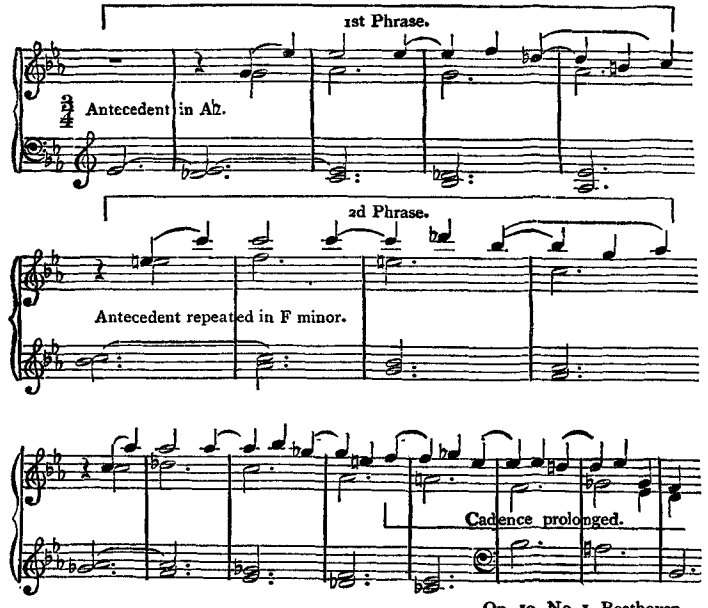
Motive from Beethoven's Sonata in D min. Op. 31, with imitation in contrary motion:

Motive from Schumann's Humoreske, Op. 20, with imitation by inversion:

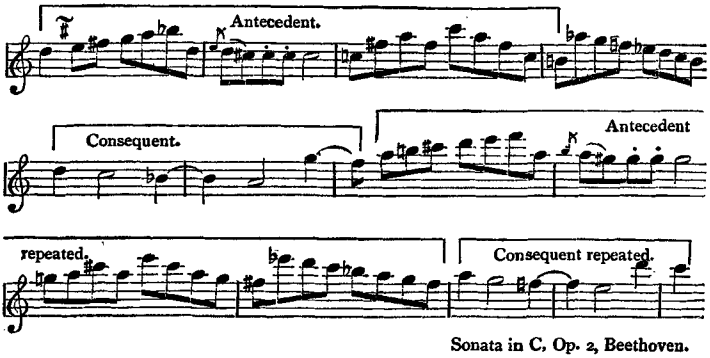
It seems hardly necessary to point out the very great importance, as thus interpreted, of motives as factors of musical form, not only because they constitute the bases from which are developed the most elaborate compositions, but also, as fully shown in "Poetry as a Representative Art," Chapter II., because they furnish the clews to their meanings. It is well known that every tune of the speaking voice, *i. e.*, every spoken expression, has its own peculiar elocutionary meaning. See "Poetry as a Representative Art," Chapters VIII. to X., also the whole of "Music as a Representative Art," at the end of this volume, and the "Orator's Manual," pages 47 to 74. When the tune of an expression is transferred to music, as it often can be, it does not lose its meaning, and there is a sense in which to develop it musically is to develop its meaning musically. It is the motive, therefore, primarily, which renders it possible for musical form, even when at the greatest distance apparently from the region of definite ideas, to represent movements of thought or of mental feeling.

As two measures usually constitute a motive, though this term may be given to both a shorter and a longer passage, two motives or four measures usually constitute a phrase, two phrases a section, and two sections, one of which is antecedent and the other consequent, constitute a period. These all are shown together, as well as the process of their development from the motive, in the following music adapted to our present purpose from Mr. Mathews' "Primer of Musical Forms." The first line below represents a motive and a modification of it, and the next two lines represent an entire period, as developed from the motive:



Op 31 in G: Beethoven.

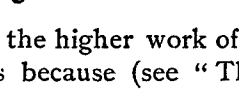
The period itself may be further developed by being shortened, lengthened, rendered complex, or joined with others into period-groups. Notice the following periods from the same work:

Op. 10, No. 1, Beethoven.



Sonata in C, Op. 2, Beethoven.

This grouping of consecutive musical sounds into measures, motives, phrases, sections, and periods, evi-

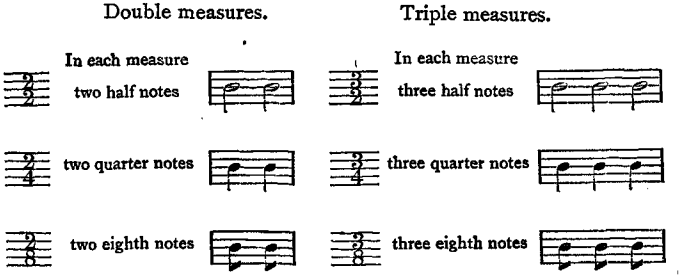
dently corresponds exactly to the grouping of consecutive poetic syllables into feet, lines, couplets, and stanzas; and it is evident too that, in the degree in which the groups or associated groups are of like length, movement, or general character of any sort, the mind will perceive that they compare and together form a unity. Very little attention to the movements of any of our popular melodies will confirm this statement. Notice the music on page 172. It may be said, too, that with most people melodies, or harmonies, for that matter, are popular to almost the exact extent in which likeness thus produced is apparent. All the world is probably pleased to hear well sung a melody like "The Last Rose of Summer." Many, but not so many, like to hear series of instrumental variations upon the same melody, provided this is clearly recognizable through them. But a much smaller number care to listen to an entire symphony developed from this melody as a theme, in the same way in which so much of Beethoven's Symphony in C minor is developed from these four notes:



The reason why the higher work of music finds fewer to appreciate it, is because (see "The Genesis of Art Form," Chapters I., II.,) no art can satisfy one to whom it appeals, except so far as his mind can compare its parts together and perceive in them how *unlike complex wholes are grouped on the principle of putting together their like partial effects.* It takes a man of education and experience in logical methods to recognize the unity of a philosophic system. In the same way it takes a man of education and experience in musical methods to recognize

in what manner the subtile conditions of musical unity are fulfilled in the symphony.

But, to return to a more practical analysis of rhythmic effects, we have to notice, first, the influence of the smaller divisions of time in the musical measures. And here, as in poetry, we find that there are only two elementary forms, namely, double and triple, but each of these may be made up of many different kinds of notes. For the sake of those unacquainted with musical notation, it may be as well to explain also that, in order to indicate the kinds of notes or of corresponding rests of which a measure is composed, and the number of them, figures are placed at the beginnings of a composition, signifying as follows:



Besides these we may have measures indicated also by the fractions, $\frac{4}{4}$ $\frac{4}{8}$ $\frac{6}{4}$ $\frac{6}{8}$ $\frac{9}{8}$ $\frac{12}{8}$ etc. The measure $\frac{2}{2}$ is sometimes represented thus ¢ or thus 𝟐; and $\frac{4}{4}$ thus C, meaning common.

We have found that in poetry, an accent, when used with one of the syllables in each foot, gives character to it, and through it to the rhythm produced when the feet are sounded in succession. The same is true in music. As a rule, the first note of a measure is perceptably accented. In order to secure this result, the first

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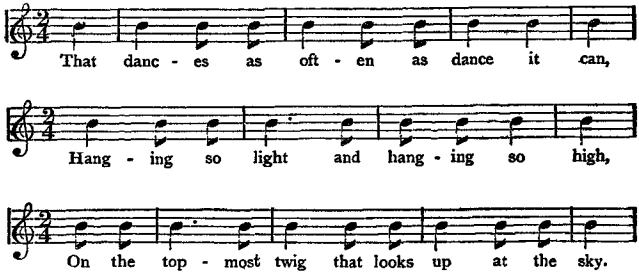
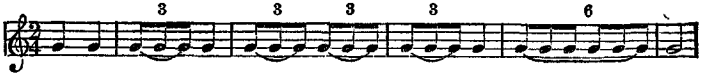
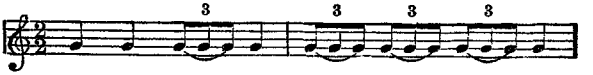
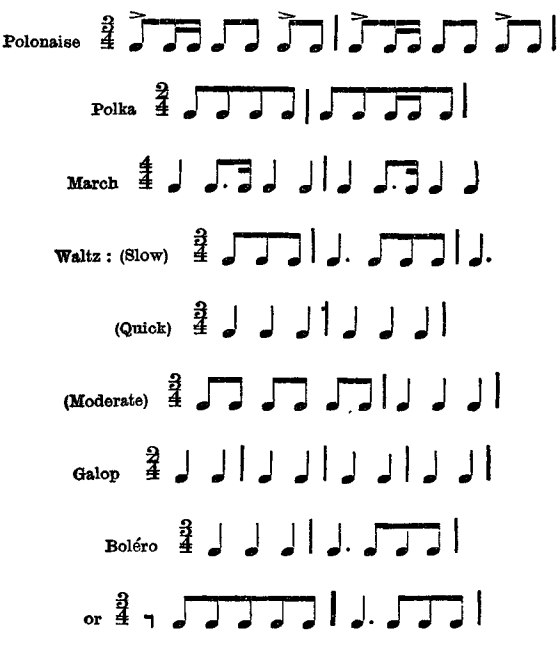
full measure beginning a musical composition is made to begin with the first accented note; and the notes preceding this are placed at the end of an incomplete measure with which the composition opens. For instance, the following lines, if used at the beginning of a song, would be arranged in music thus:

It might simplify the subject of poetical rhythm if the foot in it were treated in the same way as the musical measure, *i. e.*, always supposed to be begun with the accented syllable. In this case we should have only two kinds of feet, double and triple, of which all other kinds would be clearly recognized to be modifications. But there are objections to this method of treatment. The significance of the metres, as shown in the eighth and ninth chapters of "Poetry as a Representative Art," is determined mainly by the way in which—whether with an accented or an unaccented syllable—a line ends. Hence, irrespective of the way in which the line begins, an initial measure at its end means something entirely different from a terminal measure. It seems better, therefore, to preserve the distinction between the two, and not to say, as otherwise we should be forced to do, that, with exception of the syllables with which lines start or end, both measures

are the same. Analysis is always wise when it distinguishes between factors which for the sake of clearness of thought need to be distinguished. As shown in Chapter VI. of "Poetry as a Representative Art," the eight metres described in Chapter III. of this essay all have different effects upon the mind. For this reason it is well not to confound them.

In arranging notes in measures, it is sometimes convenient, and always allowable, to use three in the time allotted, as a rule, to two. For instance, in $\frac{2}{4}$ time we may fill the measure with three instead of two fourth notes or with six instead of four eighth notes. In such cases, the departure from the rule is indicated by the use of a brace, with which is placed a figure 3, if these notes be used for two, or a 6 if they be used for four. It must be remembered, however, that in these cases the general time does not change. The three notes are sounded in precisely the same time usually given to two, *e. g.*:

For the sake of variety, as fulfilled in the methods of *alteration* and *interspersion*, musical like poetical accent is sometimes omitted or shifted from the first note of the measure. Sometimes, too, when the measures are long and the movement is rapid, there is more than one accent in them, as in the following where a less emphatic accent is given to the first of each of the three short notes under the braces:

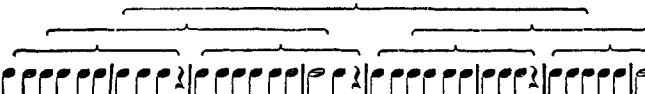


It is evident from what has been said that the opportunities for changing the general effect of the movement

through changing the rhythm, are in music as in poetry practically unlimited. Certain kinds of rhythm, like the following taken from Mr. Mathew's "Primer of Musical Forms," have been used so often that they have become typical of large classes, but there is nothing in the nature of rhythm itself to prevent these classes from being almost infinitely multiplied.

"Pieces bearing these names are usually either in the applied song-form somewhat modified, or in a rondo form. The march, galop, and polka are almost always song-forms with trio. Waltzes sometimes come in this form,

especially what are called '*Salon Valses*' or drawing-room waltzes. Dancing waltzes are commonly in suites. They are *potpourris*, consisting of from five to seven waltzes of two periods each. The work is commonly preceded by an introduction, and concluded with a final in which the prominent motives already used are somewhat elaborated, or at least recapitulated. Polonaises and Tarantelles are generally song-forms with trio. Sometimes, however, the form is much less regular."

Beside the shorter divisions of time, as in measures, motives, and phrases, we have noticed that the rhythm of music, as of poetry, depends upon longer divisions as in phrases, sections, and periods. In accordance with this, observe the close resemblance between the typical rhythm produced by the four lines of a poetic stanza and by the following, which is taken from Weber's "Theory of Musical Education."



It hardly needs to be added now that these effects as thus produced are very different from those of musical melody or harmony. Savages and young children with no musical training, and their elders who have no ability to appreciate changes in quality or pitch, all show appreciation of rhythm. Nothing could be more perfect than that in the poetry of Pope, Scott, or Byron. Yet it is said that neither of these was able to distinguish one tune from another. So with many dancers. One need not be able to follow a tune as a tune, in order to keep time to its rhythm.

It is not strange, therefore, to find rhythm, as shown both by historical records and by existing conditions of savage nations, antedating all other musical developments. But a decided advance in its possibilities and in the methods

of maintaining them amid complicated movements has been necessitated by every advance in the use of harmony. Especially was this true at the time of the rise of the polyphonic music of the middle ages (see pages 189–191), in which two or three separate melodies were sung at one and the same time. In many places in this music a long note of one melody had to be given the same time as many short notes of another melody. To provide for effects of this kind required more elaborate measurements of notes and determinations of the relations between them than had previously existed; and still another advance was necessitated when the polyphonic music gave way to the elaborate systems of harmony of more recent times. The requirements of these, however, have long been met, and probably there will never be any practical demands which our present methods cannot satisfy.

CHAPTER VII.

ART-METHODS OF UNITY, ORDER, COMPARISON, PRINCIPALITY, ETC., AS DEVELOPING POETIC HARMONY.

The Terms Tone and Color are Used in both the Arts of Sound and of Sight—Harmony a Complex Effect but a Unity—The Mind Conscious of the Divisions of Time Represented in Rhythm ; Not Conscious of those of Vibrations Represented in Harmony—In the Recognition of which, the Ear and Eye Act Similarly—The Scientific Knowledge of the Origin of Tone and Color did not Precede the Artistic Use of Them—Analogies Between Poetry and Painting or Sculpture—Also Between Architecture and Music—Poetic Effects Dependent on Laws of Sound—Examples of Verse Containing too Much Variety of Tone—Necessity for Unity of Tone-Effects—Dependent Upon the Order of the Syllables—Euphony—Vowel and Consonant-Sounds Easy to Pronounce—Examples of Euphonious Words and Poems—If Difficult to Pronounce, Illustrate Artistic Confusion—Euphony Leading to Use of Like Sounds According to Art-Method of Comparison—Accent as Necessitating Art-Methods of Counteraction, Contrast, Complement—Further Exemplification—Consecutive Tones should not be as Different as Possible—But should not be Alike on Both Accented and Unaccented Syllables—Accented Tones can be Repeated According to Art-Methods of Principality, but Subordination and Balance Require the Accented Tones to Differ from the Unaccented.

AS primarily used, the term tone is applied to only certain effects of sound, and the term color to only certain effects of sight. But in a secondary, and, at the beginning, a metaphorical sense, the term tone is applied also, though in a restricted way, to certain effects of color, and the term color to certain effects of tone. This interchange of terms shows that men in general recognize,

though often in only a vague way, the existence of those analogies between effects appealing to the ear and to the eye, which have been brought out in other volumes of this series, especially in "The Genesis of Art-Form." The same fact is also shown by the use in both classes of art of terms like pitch, key, and harmony. What these terms mean, will be unfolded as we go on.

In explaining rhythm, it was found necessary to consider under this one head the combined results of *duration* and *force*. In a future volume, also, in explaining proportion, it will be found necessary to consider similarly the combined results of *extension* and *light and shade*. In an analogous way, under the one head of tone or color, one must consider the combined results of *force*, *quality*, and *pitch*, in the arts of sound, and of *light and shade*, and the different *degrees* and *kinds* of *hue* in the arts of sight. Harmony, as produced either by tone or color, is a complex effect which, however, is in itself a unity, and, therefore, can be best interpreted by treating it as a unity, without analyzing it into its elements, except so far as may be necessary in order to render the combined whole more intelligible.

That which separates the phenomena of rhythm and, as will be shown in another place, of proportion from those of harmony is the fact that, of the divisions of time or of space respectively causing effects of rhythm and proportion, the mind is directly conscious; whereas of the divisions causing the effects of harmony, the mind is not conscious, and has come to know of them only indirectly, as a result of the investigations of science. These investigations have discovered that, back of the outer ear which is shaped so as to collect the sound, and back of the drum too, is an inner ear filled with a pellucid fluid in which

float the extremities of the acoustic nerve. Under the influence of impulses of sound from without, the drum is made to vibrate. Its vibrations are communicated to the fluid behind it, and, through this, they set into motion one or more of the delicate organs of sensation—minute pendulous rods and also ossicles that rub together—with which the acoustic nerve terminates, each of these organs being supposed to be differently affected by a vibration of a different rate. It is only when the vibrations are very frequent—some say sixteen in a second of time—that the ear derives from them the impression of any sound whatever. As they increase in frequency, and, at the same time, lessen in size, the sound becomes higher in pitch, its mere loudness depending not on the relative rate of vibrations, but upon the violence of the stroke producing them. When at last, the vibrations become too frequent for the ear to be aware of them—as when there are forty thousand of them, as some say, in a second of time—the effect upon the ear is the same as if there were no vibrations at all, and the sensation of sound is conveyed no longer.

Very similar to the operations that take place in the ear, when recognizing pitch, are those that take place in the eye when recognizing color. Passing through the pupil of the outer eye and the transparent crystalline lens behind it, rays from objects of sight reach the vitreous humor which extends to the retina, an expansion of the optic nerve. The effect of color in this is considered to be a result—but exactly how produced scientists are not as yet agreed—of certain vibrations of the organism. As in the case of sound, too, less frequent vibrations cause one hue and more frequent vibrations cause another.

The discovery of these facts, however, with the unfold-

ing from them of important inferences, which will be considered hereafter, did not precede the artistic developments of the possibilities of sound or of sight. Judging only by effects, in spite of ignorance of the causes underlying them, the artists had already worked for centuries in both departments, before any physiological scientist was able even to suggest why their methods were in the main correct. Let us follow the same order here. Let us start, as our ancestors did, with the effects themselves, and notice how, in spite of many limitations, these ancient artists, with only their sensations to guide them, constructed those harmonic systems of tone and of color, of which modern science alone has discovered the causes. These causes, as will be shown presently, are the same as those that underlie all the developments of form in art, being all traceable to the satisfaction which, for reasons unfolded in "The Genesis of Art-Form," the mind derives from being able, amid the *variety* and *complexity* of nature, to form a conception of *unity*, and, through the general method of *comparison*, to embody this conception in a product (see the chart on page 3).

Poetry bears the same relation to the arts of sound that painting and sculpture bear to those of sight. All three are largely imitative. Poetry reproduces in an artistic guise what might be heard in nature, if a man were telling a story, or if several men were conversing. Painting and sculpture reproduce in an artistic guise what might be seen in nature. For this reason it is possible to be interested, though not artistically interested, in the products of each of these arts, on account merely of that which they portray, irrespective of the style or form in which they portray it. But the converse is true with reference to music and architecture. These arts are only slightly imitative, and if

we be interested in them at all, it is owing almost entirely to their style or form. But we must not make the mistake of inferring from this fact that style or form is unimportant in the former arts; in other words, that the laws of tone as tone must not be fulfilled in poetry, or of color as color in painting.

It is chiefly with reference to poetry that this mistake is likely to be made. Admirers of Whitman might possibly—were they logical, which, fortunately, they are not—be ready to deny that the laws of sound apply to poetry in the same sense as to music. And yet they are as imperative in the one art as in the other, though, of course, in a different degree and way.

In order to recognize this, let us read over a few passages in which apparently no attempt has been made to arrange the successions of sounds. There is no necessity of arguing that in the verses following there is a lack of effects which in certain other compositions cause one sound to flow into another in such a way that whole series of sounds seem to be united, or to form a *unity*. In other words, these verses manifest too great phonetic *variety* of a kind which, while not objectionable in prose, we feel to be inconsistent with those results of taste and care and skill, which are demanded by the artistic character of poetry:

> And they thought of Alexander
> He, who o'er the world once triumphed,
> And then wept because another
> Was not found for him to conquer,
> Came and summoned its surrender,
> And how it without a struggle
> Opened quick its gates unto him.
> O how true 't is that transgressors
> Find the ways of sin oppressive

To themselves and to their children!
Where was once proud Sidon's city,
Full of wealth and full of beauty,
With its teeming population
And its harbors full of shipping,
Now, alas, are wretched hovels
Built of mud and ancient ruins.
—*Sketches of Palestine : E. P. Hammond.*

A strange belief that leaned its idiot back
On folly's topmost twig—belief that God
Most wise, had made a world, had creatures made
Beneath His care to govern and protect,
Devoured its thousands. Reason, not the true
Learned, deep, sober, comprehensive, sound,
But bigoted, one-eyed, short-sighted Reason,
Most zealous, and, sometimes no doubt sincere,
Devoured its thousands. Vanity to be
Renowned for creed excentrical, devoured
Its thousands: but a lazy, corpulent
And over-credulous faith, that leaned on all
It met, nor asked if 't was a reed or oak,
Stepped on : but never earnestly inquired
Whether to Heaven or Hell the journey led.
—*The Course of Time*, ii. : *Pollock.*

Tho' I have lost
Much lustre of my native brightness, lost
To be beloved of God, I have not lost
To love, at least contemplate and admire
What I see excellent in good, or fair,
Or virtuous : I should so have lost all sense.
—*Paradise Regained : Milton.*

This outward-sainted deputy
Whose settled visage and deliberate word
Nips youth i' the head and follies doth enmew
As falcon doth the fowl,—is yet a devil.
—*Measure for Measure*, iii., 1 : *Shakespeare.*

Not all, but some of these quotations show us that poetic effect is not dependent wholly upon the presence or absence of poetic thought. On the contrary, that which in verse charms the ear, fixes attention, remains in memory, and passes into a precept or proverb, is sometimes dependent for its popularity almost entirely upon consecutive effects of sound, so arranged as to flow into one another and together form a *unity*. Certainly, in many cases, the same thought, expressed in sounds less satisfactorily arranged, would not be remembered or repeated. Would not this be true of the following?

Breathes there a man with soul so dead
Who never to himself hath said
This is my own, my native land.
—*Lay of the Last Minstrel*, vi. : *Scott.*

Safe bind, safe find.
—*Five Hundred Points of Good Husbandry : Tusser.*

The streak of silver sea (*i. e.*, the English Channel).
—*Edinburgh Review : Gladstone.*

As true as steel.
—*Romeo and Juliet*, ii., 4 : *Shakespeare.*

The forest primeval.
—*Evangeline : Longfellow.*

From grave to gay, from lively to severe.
—*Essay on Man*, iv. : *Pope.*

And storied windows, richly dight,
Casting a dim, religious light.
—*Il Penseroso : Milton.*

I have thee on the hip.
—*Merchant of Venice*, iv., 1 : *Shakespeare.*

Othello's occupation 's gone.
—*Othello*, iii., 3 : *Idem.*

Who would quote any of the four latter had they been worded thus?:

From serious to joyful, from animated to stern.

Casting a dim, sacred light.

I have you on the shoulder.

Othello's work 's gone.

It is not true, therefore, that, in arranging words, all that is necessary is to put them together grammatically, and in such a way as to indicate their sense. To produce satisfactory poetic effects either upon the mind or ear, they must be arranged so that their sounds shall occur in a certain *order* (see page 3). To say no more, some successions of vowels and consonants are difficult to pronounce, *e. g.*, "Thou shouldst stand still," "Heaven's thought-forged forms," "Condensed to match children's comprehension." As a rule, men like to avoid difficulties. For this reason, when nothing in the sense calls for a different treatment, one prefers to have words so arranged that they can be uttered easily and rapidly. That is to say, he prefers the effect which is technically termed euphony.* In fact, without being clearly aware why he prefers this, his utterances often tend toward it

* The rhetorical fault **Euphuism** is named after the hero of Lyly's "Euphues," which was written in an *alliterative* and *assonant* style. Here is an extract from it:

"There is no *p*rivilege that needeth a *p*ardon, neither is there any *remission* to be asked, where a *commission* is granted. I speake this, gentlemen, not to excuse the *of*fence which was *taken*, but to offer a *de*fence where I was *mis*taken. A *c*leare *c*onscience is a sure *c*ard; truth hath the *p*rerogative to speake with *p*lainnesse, and the modesty to heare with *p*atience.—*The Writer: G. L. Raymond and G. P. Wheeler.*

instinctively and unconsciously. How many of the newsboys in our streets know why, almost invariably, all of them call out the names of the newspapers in the same order? Yet they do this, and the order is the one in which the names can be the most easily and rapidly pronounced.

With reference to this subject it may be said that, as a rule, the vowels *a*, *e*, *i*, *o*, *u*, and the semi-vowels, *y*, *w*, *l*, and the nasals (*m*, *n*,) and most of the sonant consonants (*v*, *z*, *j*, *d*, *b*), when combined with other consonants, are easy to pronounce; whereas the consonants, *h*, *s*, *f*, *k*, *t*, *p*, *ch*, *sh*, *th*, especially when combined with one another or with other consonants, are difficult to pronounce. Notice the euphony of the words *Albion*, *Erin*, *Caledonia*, *Columbia*, *demeanor*, *bridal*, *wonderful*, *Æolian*, *merrily*, *lovely*, *silvery*, *Clarabel*, *jollity*.

Also of those—with exception of the very unmusical successive *s*-sounds in "uplands seen"—in this "Nonsense Rhyme":

> How evanescent and marine
> Are thy chaotic uplands seen,
> Oh, ever sublapsarian moon;
> A thousand viaducts of light
> Were not so spherically bright,
> Or ventilated half so soon.

And in the following, in which the words are selected, almost as evidently as in the last, on account of their sounds:

> From Archosia, from Candaor east,
> From Margiana, to the Hyrcanian cliffs
> Of Caucasus, and dark Iberian dales;
> From Atropatia, and the neighboring plains
> Of Adiabene, Media, and the south
> Of Susiana, to Belsara's haven.
>
> —*Paradise Regained*, 3: *Milton.*

Notice also the lack of euphony in these: *barefacedness, inextricable, soothedst, stretched, pledged, adjudged, struggled, strengthened, disrespect.*

It is important, however, in this connection, to bear in mind that behind these effects of sound there may be reasons in the sense. As Alexander Bain says in his "Rhetoric": "What is hard to pronounce is not only disagreeable in the act of pronunciation, but also disagreeable to hear; for in listening to speech we cannot help having present to our mind the way that the words would affect our organs, if we had to utter them ourselves. Even in reading without utterance aloud, we have a sense of the articulate flow of the voice and to the ear." This truth applies, of course, not only to that which is euphonious, but to that which is not so. Accordingly, when for appropriate representation, the thought demands a suggestion of difficulty, nothing can be more expressive than phrases like the following, in which, therefore, we have illustrations of an artistic use of phonetic variety in the sense of *confusion* as distinguished from *order* (see page 3).

> And strains from hard bound brains eight lines a year.
> —*Epistle to Arbuthnot : Pope.*

> Staring full ghastly like a strangled man ;
> His hair upreared, his nostrils stretched with struggling ;
> His hands abroad displayed, as one that grasp'd
> And tugg'd for life, and was by strength subdued.
> Look ! on the sheets his hair, you see, is sticking ;
> His well-proportioned beard made rough and rugged.
> —*2 Henry VI.*, iii., 2 : *Shakespeare.*

> With staring countenance stern, as one astown'd,
> And staggering steps, to weet what sudden stour
> Had wrought that horror strange.
> —*Faerie Queene*, i., 8, 5 : *Spenser.*

> With complicated monsters, head and tail,
> Scorpion and asp, and amphisbæna dire,
> Cerastes horn'd, hydrus, and ellops drear,
> And dipsas; not so thick swarmed once the soil
> Bedropped with blood of Gorgon, or the isle
> Ophiusa.
>
> —*Paradise Lost*, 10 : *Milton.*

Now let us start with this fact that all acknowledge with reference to ease and difficulty in the utterance of words, and trace its development. It is a principle readily recognized that if we have placed the organs of speech into position for the purpose of uttering one sound, it requires less expenditure of effort to repeat this sound than to put them into another position for the purpose of uttering another sound. To go no further, this principle applied to practice would seem to lead, in accordance with the method of *comparison*, to the use in succession of like sounds. But is it true that this use of sounds is invariably euphonious? Are series of words like the following easy to pronounce?—"Best station," "high-arched church." Even in the case of syllables that, considered separately, are easy to pronounce,—are they so when we have a series of them, as in "We met in an enormous car"?

These illustrations of themselves are enough to show us that we cannot, without some important modification, frame any rule to the effect that the uttering in succession of like sounds is invariably euphonious. But should we, therefore, draw the inference, as some do, that the opposite is true; in other words, that in poetry the repetition of similar sounds is not euphonious, and that here is a case in which the principle of putting like effects with like does not apply? Before drawing this conclusion, let us, at least, look farther into the subject. What is the

real explanation of the difficulty of pronouncing in succession the syllables in the phrases just quoted?—It is the fact that they are used in an accented and also in an unaccented syllable immediately following it. This causes difficulty, because the vocal organs are so formed that their positions and actions in an accented and in an unaccented utterance are different. In other words, these two forms of utterance naturally *counteract* each other (see page 3). Moreover, the nature of the organs is such that ease of utterance requires that both forms should be present, and used in alternation. One cannot apply to consecutive syllables without restriction, therefore, this principle of comparison. Unaccented syllables must *contrast* with the accented ones, and in such a way too as to *complement* them (see page 3). But if this requirement be regarded, like sounds repeated only on accented or only on unaccented syllables, except in the sense in which all forms of repetition may become monotonous and tiresome, are not open to the objection urged. They do not render utterance more difficult, as suggested above, but, on the contrary, decidedly more easy; *e. g.*, "When in any den of many men of many minds." "All they thought of all the order or the thought of all the hall was all appalling." "Jumping, jarring, running, gunning, falling, crawling, lying, flying."

Intentional, and, as all admit, artistic, repetitions of the sounds of accented syllables in succeeding unaccented ones, are best explained in accordance with this principle. Take the following:

> The league-long roller thundering on the reef.
> —*Enoch Arden : Tennyson.*

When this is properly read (see page 41), as much

time is given to *league* and also to *long* as to a whole foot of two syllables. In other words, the voice after both *league* and *long* pauses a sufficient time for the pronunciation of an unaccented syllable. This is the artistic justification for the two consecutive syllables, each beginning with an *l*. The poet wishes to represent something that moves slowly, and to do this he uses words that cannot well be read in succession except by uttering them slowly, the general effect being that of accented syllables followed by pauses representative of unaccented syllables, thus:

The league (followed by an unaccented syllable) long (followed by an unaccented syllable) roller thundering on the reef.

What has been said will reveal the reason of the mistake sometimes made, when, owing to the recognized difficulty of pronouncing the same sound in both an accented and in a following unaccented syllable, the inference is drawn that the remedy for the difficulty lies in making all consecutive sounds, whatever their nature, as different as possible. This latter inference, applied to practice, would lead to the effects noticed in the first quotation on page 112, and, as will presently be shown, would violate the fundamental principle of comparison which underlies all poetic harmony.

The mistake can be obviated by recalling that, when we speak of the repetition of sounds in poetry, we mean the repetition of poetic sounds; and that the least factor of a sound distinctively poetic—indeed of any absolutely completed form of sound distinctively conversational even—includes the *complexity* involved in the *counteraction* of the *complementary* methods that we have in accented and unaccented syllables. These together are needed, though the latter may sometimes be represented by a pause

rather than by an audible syllable, in order to make one poetic foot or measure.

With this understanding of what is meant, we can go back now to the statement on page 117, and say that if we have placed the organs of speech into position for the purpose of uttering an accented sound or an unaccented sound, it requires less expenditure of effort to repeat this accented or this unaccented sound than to put them into another position for the purpose of uttering a different sound. This principle, when applied, leads, of course, to the use in succession of merely like accented or else like unaccented sounds. As a fact, it is only of the likeness in the former, *i. e.*, in accented sounds, of which in this art there is any extensive use. This is as we should expect. It is the accented sounds that seem to have *principality*, and to make these alike, naturally conveys the impression as, according to the chart on page 3, should be the case, that *comparison* has *principality*, and that the *contrast* afforded in the unaccented syllables is given *subordination.* Notice, too, that, as heard consecutively, the accented and unaccented syllables not only *complement* but, in a way, *balance* each other, and, through the agency of tone, augment the effects of *organic form*, which we have already found to be primarily produced through the agency of rhythm.

ROYAL ASIATIC SOCIETY
BOMBAY BRANCH

CHAPTER VIII.

ALLITERATION, ASSONANCE, AND RHYME.

Like Effects in the Sounds of Syllables—Alliteration—In Hebrew Poetry—In Greek, Latin, French, Italian, Spanish, German—In Anglo-Saxon—As Used by Milton, Shakespeare, and Modern English Poets—Assonance—Examples, Greek, Latin, French, Italian, Spanish, German, Anglo-Saxon, English—Two Examples from Tennyson—Assonance Used for Rhyme—Rhyme, Place of—Its History—Greek, Latin, Early English—Reason for It—Rules of, First, Second, Third, Fourth, Fifth—A Correlated Chinese Style of Composition.

BEFORE considering the relations of our subject to any more of the methods mentioned in the chart on page 3, let us notice, in order to perceive clearly exactly that with which we have to deal, the different ways in which *like partial effects can be produced in connection with unlike complex syllables.* As the factors of syllables are consonants and vowels, of course this must be done either by the use of consonant-sounds or of vowel-sounds, or of a combination of both. The first of these ways, and as formerly used in Anglo-Saxon poetry, the last of them also, gives rise to *alliteration*, the second to *assonance*, and the third, under conditions to be explained hereafter, to *rhyme*.

Alliteration, as now interpreted, is an effect produced when series of syllables, otherwise different, contain, usually at their beginning rather than end, consonants representing the same sounds. Thus, in "keep calling" the *k*

alliterates with *c*. But in "him we honor" the sounded *h* cannot alliterate with the silent *h*. To prove that the mind naturally takes satisfaction in alliteration, and is attracted by it, we have only to read the ordinary headings of our newspapers, like "The Stalwart Struggle," "Boston Buds with Big Blossoms," "The Meaning of the Message," or to recall how many of our popular proverbs, like "Fair fowls have fine feathers" exemplify it.

Alliteration seems to have been used very early in the construction of poetry. To instance no other examples, in the original Hebrew of the 119th Psalm and in the third chapter of the book of Lamentations, we find poems divided into twenty-two stanzas, each of which is named after one of the twenty-two letters of the Hebrew alphabet. More than this, each verse in each of the stanzas begins with the letter after which the stanza is named. Here is a similarity of sound at the beginnings of lines as great as we find in our day in the rhymes at the ends of them.

In Greek and Latin poetry alliteration was used very much as it is with us. In the very first line of the "Iliad," lambda followed by eta is repeated twice, and eta three times, and all of these repetitions, as we should expect from what was said on page 120, are on accented syllables.

Μῆνιν ἄειδε, θεά Πηληϊάδεω Ἀχιλῆος.

—*Iliad*, i., 1 : *Homer.*

Notice, too, the following:

Πᾶσαν, ὀπόσσον ἐπέσχε πυρὸς μένος· αὐτὰρ ἔπειτα.

—*Idem*, xxiv., 792.

Καὶ φεύγειν σὺν νηυσὶ πολυκλήϊσι κελεύσω.
Ὑμεῖς δ' ἄλλοθεν ἄλλος ἐρητύειν ἐπέεσσιν.

—*Idem*, ii., 74, 75.

Also these from the Latin of Virgil:

Ducite ab urbe domum, mea carmina, ducite Daphnim.
—*Buc. Ecl.*, viii., 68.

Si quà fata sinant, jam tum tenditque fovetque.
—*Æneid*, i., 18.

Bis rejecti armis respectant terga tegentes.
—*Idem*, xi., 630.

Ergò concilium magnum, primosque suorûm.
—*Idem*, 234.

Here are similar arrangements from the early French:

Quant cil le surent en Ely,
Si se sunt mis en sa merci.
—*L'Estorie des Engles: Geoffrei Gaimar.*

Iloc voleient sujurner
E leisser l'iver trespasser,
Mais quant Willame ço entent,
Si's aturnat tut altrement.
—*Idem.*

Brabant, Bourgongne et Boullenois,
Haynau, Holande, et Namurois.
—*Song on the downfall and death of the Earl of Warwick: Anon.*

And here from modern French:

Ah! laissez-les couler, elles me sont bien chères
Ces larmes que soulève un cœur encor blessé!
—*Souvenir: Alfred de Musset.*

J'en parle par hasard pour l'avoir entrevu;
Quelqu'un peut en pleurer pour l'avoir mieux connu.
—*Le 13 Juillet. Idem.*

Vous verrez près de vous, dans ces chœurs d'innocence,
Charlotte autre Judith, qui vous vengea d'avance.
—*Les Vierges de Verdun: Victor Hugo.*

Here from the Spanish:

Mas noble, á mis manos muere,
Antes que á morir á manos
De infames verdugos llegues.
El Mágico Prodigioso, i. : *Calderon.*

Mas no pude ; porque al punto
Las voces se desvanecen.
—*Idem.*

Arias. Ocasion debió de dalle.
Pedro. Dice que no se la dió.
—*La Estrella de Sevilla*, iii. : *Lope de Vega.*

Here from the Italian:

Morti li morti, e i vivi parean vivi.
Non vide me' di me chi vide il vero,
Quant' io calcai fin che chinato givi.
—*Purg.* xii., 67 : *Dante.*

And here from the German:

Frankreich erfüllt die Freundespflicht ; mir wird
Verstattet sein, als Königin zu handeln.
—*Marie Stuart*, ii., 2 : *Schiller.*

And here is a combination in the same syllable of alliteration and assonance such as the next quotation will show us in Anglo-Saxon poetry:

Die Bergeshöhn warum so schwarz?
Woher die Wolkenwoge?
—*Charon : Goethe.*

Alliteration, often accompanied, as has just been said, by assonance, was carried to excess by the Anglo-Saxons. The ears of their descendants became so accustomed to hear it in poetry that, in the twelfth century, as Barry

tells us in his "Description of Wales," they considered no composition elegant, but rude and barbarous, if it were not full of it. Notice the following:

> Quhat wikkitness, quhat wanthryft now in warld walkis
> Bale has banist blythnes boist grete brag blawis
> Prattis are repute policy and perellus paukis
> Dygnite is laide doun, derth to the dur drawis, etc.
> —*Douglas' Translation of Virgil's Æneid.*

> In a somer seson · whan soft was the sohne,
> I shope me in shroudes · as I a shepe were,
> In habite as an hermemite · vnholy of workes,
> Went wyde in this world · wondres to here.
> —*Vision of Piers Plowman: Langland.*

It needs to be observed, in accordance with what was said on page 120, that few among the Anglo-Saxon poets applied this method to unaccented syllables. Their alliterations were usually confined to consecutive accented syllables. Some of their poets, also, recognizing the lack of art in excessive uniformity, were satisfied in case they began with the same sounds, two syllables in one line and one syllable in the next. When they confined themselves to the latter course, they did no more, as Dr. Longmuir has shown in his Preface to "Walker's Rhyming Dictionary," than Milton often did, notwithstanding his expressed contempt for those who put the jingling of like sounds at the beginning instead of at the end of words. For instance, "Paradise Lost" begins thus:

> Of man's first disobedience and the fruit
> Of that forbidden tree;

And it ends with:

> They hand in hand with wandering steps and slow
> Through Eden took their solitary way.

Notice, also, these lines, in which both *w* and *r* are repeated:

> War wearied hath performed what war can do,
> And to disordered rage let loose the reins.
>
> —*Paradise Lost*, vi.

Considering that *f* is merely the aspirated form of *v*, here is a very marked instance of this effect:

> Of fiery darts in flaming volleys flew,
> And flying, vaulted either host with fire.
>
> —*Idem.*

Spenser, too, is full of alliteration:

> Who him disarméd, dissolute, dismayed,
> Unwares surpriséd and with mighty mall
> The monster merciless him made to fall,
> Whose fall did never foe before behold,
> And now in darksome dungeon, wretched thrall,
> Remédiless, for aie he doth him hold.
>
> —*Faerie Queene*, i., 7, 51: *Spenser.*

We find it in Shakespeare also:

> The loyalty well held to fools, does make
> Our faith mere folly.
>
> —*Antony and Cleopatra*, iii., 11: *Shakespeare.*

> Wise men ne'er wail their present woes,
> But presently prevent the ways to wail.
>
> —*Richard II.*, iii., 2: *Idem.*

> They say, best men are moulded out of faults,
> And for the most, become much more the better
> For being a little bad.
>
> —*Measure for Measure*, v., 1: *Idem.*

And in all our modern poets, *e. g.*:

> Foiled, bleeding, breathless, furious to the last,
> Full in the centre stands the bull at bay.
>
> *Childe Harold*, i.: *Byron.*

> Nor doûbt that were mankind inert and numb,
> Its core had never crimsoned all the same,
> Nor, missing ours, its music fallen dumb?
> O dread succession to a dizzy post,
> Sad sway of sceptre whose mere touch appals!
>
> —*Epilogue to Dramatis Personæ: R. Browning.*

> Current among men,
> Like coin, the tinsel clink of compliment.
>
> —*The Princess: Tennyson.*

> Ah, Maud, you milk-white fawn, you are all unmeet for a wife;
> Your mother is mute in her grave, as her image in marble above.
>
> —*Maud: Idem.*

> Ye floods
> And windy waves of woods;
> Ye valleys and wild vineyards, ye lit lakes
> And happier hill-side brakes
> Untrampled by the cursèd foot that trod
> Fields golden from their god,
> Fields of their god forsaken.
>
> —*A Song of Italy: Swinburne.*

Assonance is due to the use of like vowel-sounds,—like vowel-sounds, notice, as in *her* and *burr*, not like vowels, as in *her* and *error*. As vowels are generally more prolonged in pronunciation than are consonants, they are more effective in producing similarity of sound, while at the same time they obtrude themselves less upon the observation either of the ear or eye. We do not always notice assonances, unless we search for them. We notice

alliteration at once. For these reasons, poets who wish to avoid an appearance of too great a regard for form, are much more ready, of the two, to employ assonance. Its use is common in all poetry.

Notice the following:

Εἰ δέ κε μὴ δώωσιν ἐγὼ δέ κεν αὐτὸς ἕλωμαι
Ἥτεὸν ἢ Αἴαντος ἰὼν γέρας, ἢ Ὀδυσῆος
—*Iliad*, i., 137-8 : *Homer.*

Πορφυρέοις πέπλοισι καλύψαντες μελανοῖσιν.
—*Idem*, xxiv., 796.

And in this next we have both alliteration and assonance.

Ἐκ δ' ἑκατόμβην βῆσαν ἑκηβόλῳ Ἀπόλλωνι.
—*Idem*, i., 438.

Bis rejecti armis respectant terga tegentes.
—*Æneid*, xi., 630 : *Virgil.*

Adventusque virûm, fremitusque ardescit equorum.
—*Idem.*, 607.

Supplicia ! et scopulos lachrymosis vocibus implent.
Haec adeò ex illo mihi jam speranda fuerunt.
—*Idem*, 274, 275.

E el est bóne e el est béle ;
Si est truvée en la gravele
De Libe, de cele cuntrée.
—*Early French Translation : Lapidaire de Marbode.*

Et nous nous souvenous que nous marchions ensemble,
Que l'âme est immortelle, et qu'hier c'est demain.
—*Sonnet on Victor Hugo : Alfred de Musset.*

Il reçoit, sans faiblir, cette Couronne où pèse
La gloire da soixante rois.
—*Le Sacre de Charles X. : Victor Hugo.*

Debió importar la batalla
Al que la perdió, perderla,
Que al que la ganó, el ganarla.
Cipr. Concedo ; pero debiera, etc.
—*El Mágico Prodigioso*, i.: *Calderon.*

Mirad que es hombre en efecto ;
Esto os digo y os respeto
Porque os fingisteis el rey.
—*La Estrella de Sevilla*, ii.: *Lope de Vega.*

Ed ecco a poco a poco un fummo farsi
Verso di noi, come la notte oscuro,
Nè da quello era loco da cansarsi.
Questo ne tolse gli occhi e l' aër puro.
—*Purgatorio*, xv., 142–145 : *Dante.*

Weil sie sich nur befliss ein Weib zu sein,
Und um sie buhlt die Jugend und das Alter.
—*Maria Stuart*, ii., 9: *Schiller.*

Diese Richtung ist gewiss,
Immer schreite, schreite,
Finsterniss und Hinderniss
Drängt mich nicht zur Seite.
—*Neugriechische Liebe-Skolien : Goethe.*

It abounds too in poetry of our own tongue:

Alle tha theines
Alle tha sweines
Feire is crudde
Helde geond felde
Summe heo gunnen aeruen,
Summe heo gunnen urnen, etc.
—*Layamon's trans. of Wace's Le Brut d'Angleterre.*

Full swetely herdè he confessioun.
—*Canterbury Tales, Prologue : Chaucer.*

So muchel of daliaunce and fair langage
He hadde maad ful many a mariage.
—*Idem.*

So well they sped that they be come at length
Unto the place whereas the Paynim lay.
—*Faerie Queene*, i., 5, 29: *Spenser.*

Blind fear that seeing reason lead finds safer footing than blind reason, stumbling without fear; to fear the worst oft cures the worst.
—*Troilus and Cressida*, iii., 2: *Shakespeare.*

For then and not till then he felt himself
And found the blessedness of being little.
—*Henry VIII.*, iv., 2: *Idem.*

Her fruit trees all unpruned, her hedges ruined,
Her knots disordered and her wholesome herbs
Swarming with caterpillers?
—*Richard II.*, iii., 4: *Idem.*

Dwelt from eternity, dwelt then in thee,
Bright effluence of bright essence increate.
—*Paradise Lost*, iii.: *Milton.*

Of their great potentate; for great indeed
His name, and high was his degree in heaven.
—*Paradise Lost*, v.: *Idem.*

Lofty and over-arched, with open space
Beneath the trees, clear-footing many a mile,
A solemn region.
—*The Prelude*, 9: *Wordsworth.*

And the bay was white with silent light
Till rising from the same.
—*Ancient Mariner: Coleridge.*

Mortal warp and mortal woof
Cannot brook this charméd roof;
All that mortal art hath wrought
In our cell returns to nought.
—*From the Monastery: Scott.*

In the following notice the repetitions of the same vowel-sounds in the words *its, lips, in, with, ribb'd, drip,*

and *with*, also in *red, red*, and *ledges*, as well as in *field* and *heath*:

> Its lips in the field above are dabbled with blood-red heath,
> The red-ribbed ledges drip with a silent horror of blood.
> —*Maud: Tennyson.*

Some of the poets of Spain, especially the dramatists, (see page 129) have made a point of employing assonance as we do rhyme at the ends of lines. In English poetry it is hardly admissible, except at places where rhymes are not always expected or made prominent, but there have been times when it was common, *e. g.*:

> When morning beams began to peep
> Among the branches green
> The lovers rose, and part to meet
> And tell their love again.
> —*Ballad of the Hireman Chiel.*

> And Cloudesly lay ready there in a cart,
> Fast bound, both foot and hand;
> And a strong rope about his neck,
> All ready for a hang.
> —*Old Ballad of William of Cloudesly.*

Notice this also:

> Maiden, crowned with glossy blackness,
> Lithe as panther forest-roaming,
> Long-armed naiad, when she dances,
> On a stream of ether floating.
> —*Spanish Gypsy: Geo. Eliot.*

Rhyme results from putting like syllables at the ends of different lines of verses or of half lines, or, sometimes, of phrases. In the following, for instance, they are at the ends of half lines:

I bring fresh showers for the thirsting flowers
From the seas and the streams;
I bear light shade for the leaves when laid
In their noon-day dreams.

—*The Cloud: Shelley.*

And in this, they are at the ends of phrases:

And the silken, sad, uncertain rustling of each purple curtain,
Thrilled me, filled me with fantastic terrors never felt before.

—*The Raven: E. A. Poe.*

Here for a comic effect three in succession are at the end of each line:

Even is come and from the dark park, hark,
The signal of the setting sun,—one gun,
And six is sounding from the chime, prime time
To go and see the Drury Lane dane slain,
Or hear Othello's jealous doubt spout out,
Or Macbeth raving at that shade-made blade.

—*Nocturnal Sketch: T. Hood.*

And here a peculiar effect not otherwise different from that of ordinary verse is produced by dropping one letter from the beginning of each successive rhyming syllable:

I bless thee Lord because I GROW
Among the trees which in a ROW,
To thee both fruit and order OW.

What open force or hidden CHARM
Can blast my fruit or bring me HARM,
While the inclusure is thine ARM?

—*Paradise: Geo. Herbert.*

As has been said before, alliteration and assonance were used by the Hebrews at the beginnings of lines. Rhyme they did not use, though it is employed to excess among the present nations of the Orient, many of whose

so-called poems are made up of series of lines all of which end with a similar syllable. Largely for this reason, perhaps, some suppose that rhyming originated in the East; but the statement is made on good authority that it cannot be traced farther back than the rymours of Normandy, the troubadours of Provence, and the minnesingers of Germany. It never occurred to the Greeks and Romans to use rhymes as we do; but, now and then, they seem to have stumbled upon them; or, possibly, recognizing their effects, they intentionally introduced them into their blank verse as Shakespeare sometimes does. In the following we have not only assonance but rhyme:

Δαέρων ἢ γαλόων, ἢ εἰνατέρων εὐπέπλων.
—*Iliad*, xxiv., 769 : *Homer.*

Τῇσιν δ' Ἀνδρομάχη λευκώλενος ἦρχε γόοιο,
Ἕκτορος ἀνδροφόνοιο κάρη μετὰ χερσὶν ἔχουσα.
—*Idem*, 723, 724.

And here is alliteration, and what in English would be an "allowable" rhyme:

Se causam clamat, crimenque, caputque malorum:
Multaque per moestum demens effata furorem.
—*Æneid* xii., 600–601 : *Virgil.*

And we find other expressions like this, in which both the *er* and the *us* suggest a recognition of rhyme-effects.

Terque quaterque manu pectus percussit honestum.
—*Idem*, *155.*

Rhymes are not found in England earlier than the twelfth century, when Layamon used them in a translation of Wace's "Le Brut d'Angleterre," which was rhymed in the original. About the time of Chaucer they became common, and have continued so ever since.

Nor without good reason. Placed, as they are, at the

ends of lines, they serve to separate these, one from the other, and to emphasize the element of form in their composition (see page 44). They do this, moreover, by satisfying the distinctively artistic tendency of the mind to compare and classify effects that are alike, indicating clearly the length of each line, and which lines are meant to correspond.

According to the principles now in vogue, there are five conditions necessary to render rhymes satisfactory: First: In the rhyming syllables, the vowel-sounds (not necessarily the vowel-letters) and whatever sounds (not letters) follow them must be the same, *e.g.*, *burn, fern, earn; foal, roll, dole.* This same principle applies to double rhymes of two syllables, like *glory* and *hoary*; also to triple rhymes like *readily* and *steadily.*

Second: Rhymes must begin on accented syllables; and the accents compared must be equally primary or secondary; *readily*, a triple rhyme for *steadily*, rhymes also, because of its secondary accent, with *victory*, but does not rhyme with *duty* or *sea.* Only in a parody should one sing:

> New volumes came across the sea
> For Mister Mudie's library.
>
> —*Captain Reece: Gilbert.*

Third: In rhyming syllables the consonant-sounds before the rhyming vowels must differ; *e. g.*, *meet* and *meat* do not rhyme, but they both rhyme with *sweet* or *greet;* neither do *light* and *delight* rhyme, but they both rhyme with *might* or *bright.* *Indewd* in the following is a faulty rhyme:

> Him shall he make his fatal instrument
> T'afflict the other Saxons unsubdewd;
> He marching forth with fury insolent
> Against the good king Oswald, who, indewd
> With heavenly power, etc.
>
> —*Faerie Queene*, iii., 3, 38: *Spenser.*

Fourth: Rhymes, if used at all, should be perfect, although the results of careless workmanship like the following are termed "allowable":

> A barbarous phrase no reader can approve
> Nor bombast, noise, or affectation love.
> —*The Art of Poetry, after Boileau : Dryden.*

Fifth: Rhymes should not be too far apart. It is one of the simplest principles of art that effects should appear to be what they are intended to be. Therefore rhyming lines should not be so separated by intervening lines that the ear will fail to detect that they are meant to go together.

Before leaving this subject, mention ought to be made of a style of composition common among the Chinese, and said to be required by some of their canons of criticism. It is relative here, because it is evidently only a different application of the same principle that with us is exemplified in alliteration, assonance, and rhyme. In accordance with this method, the same root-germ is repeated in many or all of the principal words of the same line. The resulting effect may be represented in English as follows:

> The physical physiognomy of the physician.
>
> The philosophic Philadelphian philanthropist.
>
> Servants that serve them with subservient servility.

CHAPTER IX.

COMPARISON BY WAY OF CONGRUITY, CENTRAL POINT, PARALLELISM, ETC., AS DETERMINING THE USE OF LIKE POETIC SOUNDS.

Inartistic Effects of an Excessive Use of Alliteration, Assonance, and Rhyme—Objections urged against Rhyme—These Forms should not be Discarded, but Used in Accordance with the Art-Methods: Unity, Variety, Comparison, Contrast—Congruity in Thought as Represented in Sound-Effects—Applied to Alliteration and Assonance—Influence of these upon Association and Memory—Illustration—Influence of Incongruity—Of the Art-Method of Comprehensiveness—Methods of Principality, Central-Point, Subordination, Setting, as Exemplified in Sound-Arrangements—Correspondence in this Regard between Effects of Poetic and Musical Harmony—Similar Actions of the Mind in both Arts—Parallelism as Emphasized by Rhyme.

THE peculiarity of poetry, as was shown in "Poetry as a Representative Art," consists in the fact that its medium is composed of words, which words, in turn, are forms of thought. If, therefore, attention be directed too exclusively to the form as form, the thoughts, which alone give it real value, will not produce their legitimate effects. For this reason, there is always an inartistic tendency in any excessive use of alliteration, assonance, or rhyme. Moreover, as explained in Chapters I. and II. of "Art in Theory," there is a sense in which all art-products are artistic in the degree in which they are natural. They appear most natural, of course, when

they appear most spontaneous. But too great attention expended upon the mere selection of letter-sounds interferes with spontaneity of effect. Excessive alliteration, assonance, and rhyme suggest calculation, contrivance, effort, and this of a character not very choice in quality. They are all in themselves comparatively easy to produce; and, unless entering into the formation of a word exactly fitted to convey the meaning that is intended, they suggest an unwarranted sacrifice of sense to the mere jingling of sounds, and, therefore, a cheap form of ornamentation. See "Poetry as a Representative Art," Chapters XIII. and XIV. Accordingly, there is the best of justification for a parody such as this:

Holofernes: I will something affect the letter, for it argues facility.
The preyful princess pierced and prick'd a pretty pleasing pricket;
Some say a sore; but not a sore, till now made sore with shooting.
—*Love's Labor's Lost*, iv., 2 : *Shakespeare*,

For somewhat similar reasons rhyme, too, has been attacked. Ben Jonson, for instance, speaks of it as

Wresting words from their true calling,
Propping verse for fear of falling
To the ground;
Jointing syllables, drowning letters,
Fastening vowels as with fetters
They were bound.
—*Underwoods*, xlvii. : *A Fit of Rhyme against* [*Rhyme : B. Jonson.*

Milton also, in his note at the opening of "Paradise Lost," has his criticism to make about the "jingling of words"; and Dryden thus speaks against what he himself used constantly:

> Till barbarous nations and more barbarous times
> Debased the majesty of verse to rhymes;
> Those rude at first: a kind of hobbling prose
> That limped along and tinkled at the close.
> —*Epistle the Fifth : Dryden.*

At the same time, we should err did we draw the inference that alliteration, assonance, and rhyme should be excluded from verse. They abound through all the range of our poetry, and the mere fact that they are sometimes misused is no reason why they should not be used at all. Instead of saying, therefore, with Sidney Lanier, when referring to the first two of them in his "Science of English Verse," that "perhaps no person who has never been a practical craftsman in verse would be aware how carefully the technic of the word-artist unconsciously leads him away from these recurrences," one would better start by acknowledging what will be abundantly proved by the quotations following, namely, that these recurrences, because used in accordance with the principle of *grouping like partial effects in unlike complex wholes*, constitute of themselves the very substance of verse-harmony. This being so, to find out the methods necessary to an artistic use of them, is to find out the secret—so far as mere knowledge is concerned—of the poet's art. Nor can the end of our endeavors here be obtained by a mere negative statement of what should not be done. The only sure way of learning how to avoid inartistic effects, is to learn positively how to produce artistic ones. But how can we learn this? How better, in the case before us, than by noticing the special applications to our particular subject of the general principles unfolded in "The Genesis of Art-Form," and represented on page 3 of the present book? As fundamental to these principles, it was shown that the

main object of art is to accommodate the mind's desire for *unity* to nature's fact of *variety*, and that this desire is carried into execution by efforts at *comparison* constantly modified by different tendencies in the direction of *contrast*.

Of the methods described in "The Genesis of Art-Form" as entering into the general effects of unity, *comparison*, moreover, when considered as conditioned upon the requirements of the product, was shown to be manifested by way either of likeness in the thought expressed in forms, or *congruity*; of likeness in the forms themselves, or *repetition*; or of likeness in the elements underlying both *congruity* and *repetition*, which causes them to be allied as in *consonance*. Let us now take up in succession each of these methods—congruity, repetition, and consonance—and notice the influence of each upon the use of alliteration, assonance, and rhyme.

Likeness in the thought expressed, or likeness by way of congruity, had evidently little to do with the origin of any effects such as we are now considering. These are almost entirely developed from the requirements of sound as sound. Nevertheless, it must not be supposed that here, any more than elsewhere in art, the requirements of thought are wholly without influence. To begin with a general principle capable of application to all that can be said in this connection, notice that successive utterances, in the degree in which they are alike, require less effort not only of the physical powers but of the mental by which the physical are controlled and interpreted. When a man is called upon to articulate, or to hear a series of sounds that are alike or allied, there is less to tax or perplex his mind, than if they were unlike. As a result, therefore, the ease of utterance obtained through a repe-

tition of sounds has a tendency to cause the mind to think that what is being said is of the same general character as that which has been said; in other words, to cause the mind to group and to classify that which is being uttered with that which has been uttered. That this is so, may be brought out more clearly, perhaps, by referring to an opposite fact. This fact is, that, in case one wishes to convey the impression that what is being said is not of the same general character as that which has been said, but distinctly and importantly different from it, he indicates this by giving to a word or phrase —in elocution, say, in which art the fact is most apparent —what is termed an *emphasis*. But how is elocutionary emphasis of any kind imparted, except through applying time, force, pitch, or quality in a method which *contrasts*, in some way, with the method used with other accompanying words or phrases?

Of course, for the very reason just mentioned, it follows that these repeated sounds, if used to excess, become wearisome not only to the ear, but also to the mind, which does not relish the suggestion that no new idea is being brought to its consideration. Nevertheless, here is a principle in accordance with which congruous or like ideas, if expressed in congruous or like sounds, have a tendency to suggest such conceptions as those of association, connection, or continuity. As Dr. Longmuir says in his preface to Walker's "Rhyming Dictionary," in language that may be applied not only to alliteration but to assonance:

"When a subject is proposed for discussion or description it is surely somewhat remarkable that so many of the words, appropriate to the subject, should begin with the same letter. It is this consideration that probably would lead down to the roots of our language and might discover the cause, why it is so difficult altogether to eradicate alliteration from our speech. Thus were

we to take gold for an illustration, we should find that, under some aspects, it glows, and in others gleams; all grasp for it and many groan under it; it gilds the saloon, it glitters on the brow of beauty, and excites the gaze of the multitude; it has been used as a gag to the loquacious, a goad to the indolent, a guerdon to the poet, and, rarely, a gift to the meritorious. This subject, however, belongs rather to the profound philologist than to the mere describer of the externals of our English poetry."

Notice, too, in this connection what is said on page 135 of Chinese poetry. Its repetitious use of the root-germ is evidently only a natural development of such a thought as is suggested in this quotation from Dr. Longmuir.

Aside, too, from any connection or fancied connection between sound and sense of the kind just indicated, there is no doubt that the grouping of like effects of sounds, giving, as it does, a like tone or color to different words, causes them not only to be associated in mind, but, because so, to be retained in memory, as otherwise would not be the case. Notice how true this is in expressions like the following:

"Money makes the mare go." "All is not gold that glitters." "Penny wise, pound foolish." "Cleanliness is next to godliness." "Chronic diseases must have chronic cures." "The right man in the right place."

Of course, it follows that rhymes too have a similar effect, *e. g.*:

Light gladdens, darkness saddens.

All are but parts of one stupendous whole
Whose body nature is, and God the soul.

—*Essay on Man: Pope.*

All nature is but art unknown to thee;
All chance, direction which thou canst not see;
All discord, harmony not understood;
All partial evil, universal good;
And spite of pride in erring reason's spite,
One truth is clear, Whatever is, is right.

—*Idem.*

There is, therefore, such a thing as having congruity of thought manifested by congruity of sound. This is the fact which excuses an occasional use of lines like the following, in the first of which the continual whistling of the wind is represented in the *w*; and in the second of which the continual check put upon free vitality of movement is represented in the *d*.

> O wind, O wingless wind that walkst the sea,
> Weak wind, wing-broken, wearier wind than we.
> —*On the Cliffs : Swinburne.*

> And dulled to death with deep dense funeral chime
> Of their reiterate rhyme.
> —*Idem.*

The converse too is true, of course, namely, that incongruity of thought may be manifested by incongruity of sound; as here, by way of emphasis, to indicate general mental incongruity:

> What? keep a week away? seven days and nights?
> Eightscore eight hours,—and lover's absent hours,—
> More tedious than the dial eightscore times?
> —*Othello*, iii., 4 : *Shakespeare.*

And here, by way of description, to indicate a special incongruity connected with the conception of the thing described:

> Ay, in the catalogue ye go for men;
> As hounds and greyhounds, mongrels, spaniels, curs,
> Shoughs, water-rugs, and demi-wolves are clep'd
> All by the name of dogs.
> —*Macbeth*, iii., 1 : *Shakespeare.*

Of course, too, so far as what is termed comprehensiveness, (see page 3 and "The Genesis of Art-Form," Chap-

ter IX.), can be represented in form as distinguished from thought, this also would be indicated by a series of congruous sounds, as in the first two lines of the following, accompanied by a series of incongruous sounds, as in the last lines.

> And the muttering grew to a grumbling;
> And the grumbling grew to a mighty rumbling;
> And out of the houses the rats came tumbling.
> Great rats, small rats, lean rats, brawny rats,
> Brown rats, black rats, gray rats, tawny rats,
> Grave old plodders, gay young friskers,
> Fathers, mothers, uncles, cousins,
> Cocking tails and pricking whiskers;
> Families by tens and dozens.
> —*The Pied Piper of Hamelin: R. Browning.*

In "The Genesis of Art-Form" it was pointed out that the recognition of likeness in thought is greatly facilitated by the like arrangement of unlike forms about a *central-point*, itself occupied by the feature of principal interest. It was shown that the concentration of the lines or light upon this feature naturally concentrates upon it the attention of the mind. The central-point is thus a nucleus or focus of the grouping, and furnishes a clew or key to interpret that to which the other features of a composition are related, though only in thought. On page 170 of the same volume, the corespondence between this principle and the recurrence of the key-note in music was pointed out. Occasionally we find poets, unconsciously as it seems, producing a similar effect in the arrangement of poetic sounds. By emphasizing through arrangement one series of alliterations or assonances they make this the *principal* or *central* series, to which all other series in the passage are made *subordinate*, or are merely

used as a *setting* (see page 3). In the following, for instance, the *l* which is used in the principal words, is the principal alliteration, which only the majority of people would notice. It occurs thirteen times, five times at the beginning of a syllable, and six times at its end, and nine times on accented syllables. Notice also—though this anticipates what is to be observed hereafter—how the attention is emphatically drawn away from the *l*-sounds, first, by the assonant *e*-sounds and *u*-sounds in the second line, next by the assonant *i*-sounds in the third and fourth lines, and lastly by the assonant *e*-sounds, in *beams*, *sea*, and *year*. As a result of all these arrangements, the passage as a whole has a general sound-effect of great *unity*, but secured in so artistic a manner as not to give the slightest suggestion of the unnatural or artificial.

> Ah, when sha*ll* a*ll* men's good
> Be *e*ach man's r*u*l*e*, and *u*niversa*l* p*e*ace
> *Lie l*ike a shaft of *li*ght across the *l*and,
> And *l*ike a *l*ane of beams athwart the s*ea*,
> Through a*ll* the circ*l*e of the Go*l*den Y*e*ar?
>
> —*The Golden Year: Tennyson.*

According to another arrangement securing this *unity* of effect, like sounds used on particularly emphatic words are introduced near the beginning, and also somewhere in the middle and finally at the end of a sentence. This too is identical with an arrangement recognized to be satisfactory in music, where often the key-note of a melody is sounded at these places. Each sentence in the following is constructed on this principle. In the first, notice the *em* followed by the *our*, *powers*, and *how*, and then by *en*, *en*, *en*. In the second, notice *repair*, *calamity*, and *despair*; also in the intervening clauses, the *own*, *over*,

force, and *hope*, which last sound, too, as arranged, might end a climax, with the *re* and *we* as the intervening assonance.

> And reass*e*mbling *o*ur afflicted p*o*wers
> Consult h*o*w we may h*e*nceforth most off*e*nd
> Our *e*nemy ; our *o*wn loss how rep*a*ir ;
> How *o*vercome this dire cal*a*mity ;
> What r*e*inf*o*rcement w*e* may gain from h*o*pe ;
> If not, what r*e*solution from desp*a*ir.
>
> —*Paradise Lost*, i. : *Milton.*

In this, notice the long *a* (including *ei*) with the intervening assonances of short *a*, and of *or* :

> So were cre*a*ted, n*or* c*a*n justly *a*ccuse
> Th*ei*r m*a*ker *or* th*ei*r m*a*king *or* th*ei*r fate.
>
> —*Paradise Lost*, iii. : *Milton.*

These connections between characteristics of harmony as produced in music and in poetry are mainly interesting as showing—what will be brought out more clearly hereafter—how analogously the mind works when securing, though unconscious of its method, either musical or poetic unity of effect. No one can fail to detect in both arts the operation of the same general principle. In both the emphatic sounds after starting at one point, circle off, as we may say, bringing in other emphatic sounds, and then after returning at intervals, at last return finally to the point from which they started. On page 105 a typical rhythm is shown to be representative of either a poetic or a musical movement ; and here the same may be said to be shown of a typical series of tones.

The chief effect, in this connection, of rhyme or of assonance, when used, as indicated on page 131, instead of

rhyme, is to emphasize the *parallelism* (see page 3), which, as indicated on page 29 is exemplified in all versification. To perceive parallelism in unrhymed blank verses, it is often necessary to see them printed; but in successive lines ended with the same sounds, the ear recognizes it at once.

CHAPTER X.

REPETITION, ALTERNATION, CONSONANCE, INTERCHANGE, ETC., AS DETERMINING THE USE OF LIKE POETIC SOUNDS.

Repetition and Alternation as Influencing the Use of Alliteration, Assonance, and Rhyme—Of Alternation as Developed from Parallelism and Balance—Balancing Series of Sounds—In Whole Words that are Alike—How these Exemplify Alternation—Balancing Series of Sounds alike by Alliteration or Assonance—From the Greek, Latin, Spanish, French, German, English—Excess in this to be Avoided—Massing as a Corrective of Excessive Balance or Alternation—And Interspersion as Corrective of Excessive Massing—Also Complication and Continuity—Poetic Examples of these Methods—Consonance as Applied to Sounds; Phonetic-Syzygy—Examples of the Use of Allied Consonant-Sounds—Of Allied Vowel-Sounds—Dissonance and Interchange in Music—In Poetic Sounds—Illustrations.

AS has been said before, and it may as well be recalled here for the encouragement of those who may possibly have found what they consider an unnecessary amount of subtlety in the statements of Chapter IX., likeness in thought by way of *congruity* is exemplified to only a limited extent by the use of alliteration, assonance, and rhyme. What is usually exemplified, is likeness in form by way of *repetition* (see page 3). What repetition is in itself needs no explanation. We need to consider only the ways in which it is modified by the natural tendencies always influencing it when nature is allowed to assert herself. These are in the direction of *contrast* as

shown in *alteration* and of *complement* as shown in *alternation.* Alliteration, assonance, and rhyme can evidently be varied by altering the letter-sounds with which, in successive syllables, they are combined. This introduces, and sometimes very effectively, the element of contrast. Notice, in the following, how the repetition of syllables in which, as usually in Anglo-Saxon, vowels and consonants are both alike, serves to accentuate the effect of likeness, and increase whatever impression of a lack of spontaneity or of naturalness they may convey.

> All the wandering waves of sea with all their warring waters
> Roll the record on forever of the sea-fight there.
>
> —*Athens : Swinburne.*

> But lightning still and darkling downward, lo
> The light and darkness of it,
> The leaping of the lamping levin afar
> Between the full moon and the sunset star.
>
> —*The Garden of Cymodoce : Idem.*

Notice also what was said of rhymes under the *third* head, on page 134.

Mere *alteration*, however, is not all that is necessary in order to remedy the effects of excessive alliteration or assonance. Let us pass on to the modifications of these that are suggested by the methods in the column on page 3, in which we find *complement*, *balance*, *parallelism*, and *alternation.* Notice, first, that in order that there should be any effect of alliteration, assonance, or rhyme, two like sounds are necessary. But even these two sounds would not always emphasize the effect so that the ear would necessarily, though possibly unconsciously, experience its artistic influence, unless it were followed by other like sounds. If followed by sounds exactly like the first two, we should have simple *repetition.* But we are consider-

ing now modifications of this. Evidently, the earliest suggested modification of it would be to have a series of two like sounds followed by another different series of two like sounds. In this case we should have two separate instances of *comparison*; or *comparison* as a principal method together with *variety*. If now, recalling that variety is artistic in the degree in which it really conforms to the principle of unity, the poet choose, for his second series, sounds decidedly different from those in his first series, he will produce the effect of *contrast*. But, as elements of a single unity, comparison and contrast together, even if there were not two series of sounds, would necessitate *complement*; and this, as shown in the list of methods on page 3, is that from which are developed *balance*, *comprehensiveness*, *parallelism*, and the *alternation* for which we are here in search.

We are able now to give a good reason, and one apparently little understood, why poets so often when they use like sounds use two that balance each other; and, not only so, but often use different series of these balancing sounds, taking care, also, to have the sounds of the one series such as will naturally contrast with those of another series, as, for instance, *l* contrasts with *h*, or *b* with *s*, or *u* with *a*, or *o* with *e*.

Sometimes this method fulfills the principle of *balance* in its most technical sense, in that both factors of a series are alike in all regards, *e. g.*:

> Dowered with the *hate* of *hate*, the *scorn* of *scorn*,
> The *love* of *love*.
>
> —*The Poet: Tennyson.*

> With *ruin* upon *ruin*, *rout* on *rout*
> *Confusion* worse *confounded*.
>
> —*Pardise Lost*, ii.: *Milton.*

Bright *bank* over *bank*
Making *glorious* the *gloom*,
Soft *rank* upon *rank*,
Strange *bloom* upon *bloom*,
They kindle the liquid low twilight and dusk of the dim sea's womb.
Off Shore: Swinburne.

Notice also several different ways in which the above may be said to exemplify the principle of alternation: first, in the regular succession of accented followed by unaccented syllables; second, in the succession of at least two similar accented syllables, though separated by unlike accented syllables; third, in the series of two measures, both having a similar accented syllable followed by another series of two measures, both having a similar accented syllable, which, however, contrasts with the accented syllable in the first series, and fourth, in the arrangement of the lines, only every other one of which has a like rhyme.

More frequently, however, as influenced by the tendencies inclining to *counteraction*, *complement*, and *parallelism*, the balancing factors differ somewhat, fulfilling the method not only of *repetition*, but also of *alternation*. Notice in this the sounds of *αυ* and *η*:

Αὐτὴ δ' αὖτ' ἔδυνεν, ὅθι ζωστῆρος ὀχῆες.
Iliad, iv., 132: *Homer.*

In this the sounds of *u* and *c*:

Corripuere, ruuntque effusi carcere currus.
—*Georgica*, iii., 104: *Virgil.*

Here are instances of balance in almost every line, in some cases, too, of whole words.

Dios, à quien ninguno iguala,
Un principio sin principio,
Una esencia una sustancia,
Un poder y un querer solo;
Y cuando como este haya
Una, dos ó mas personas,
Una deidad soberana,
Ha de ser sola en esencia,
Causa de todas las causas.
—*El Mágico Prodigioso*, i., *Calderon.*

In this notice the sounds of *s*, *p*, and several of *ou*:

Muse, sois donc sans crainte ; au souffle qui t'inspire
Nous pouvons sans péril tous deux nous confier.
Il est doux de pleurer, il est doux de sourire
Au souvenir des maux qu'on pourrait oublier.
—*La Nuit d'Octobre : Alfred de Musset.*

In this, the sounds of *o*, *u*, *e*, and *a*:

Là dov' io più sicuro esser credea :
Quel da Esti il fe'far, che m'avea in ira, etc.
—*Purg.*, v., 76,77 : *Dante.*

In this, the sounds of *i*, *u*, *i* and *ei*, with balancing phrases in the third line:

Bin ich nicht immer noch voll Muth und Lust?
Und Lust und Liebe sind die Fittige
Zu grossen Thaten.
Grosse Thaten? Ja,
Ich weiss die Zeit.
—*Iphigenie auf Tauris*, ii., 1 : *Goethe.*

In this, the sounds of *w*, *f*, *ch*, and *d*:

Beware of fraud, beware of ficklenesse,
In choice and chaunge, of thy deare-loved dame.
—*Faerie Queene*, i., 4, 3 : *Spenser.*

In this, the sounds of *th*, *wa*, *s*, and *e*:

Tho' thou the waters warp,
Thy sting is not so sharp,
As friend remembered not.
—*As You Like It*, ii., 7: *Shakespeare.*

In this, the sounds of *a*, *y*, or *i*, *w*, and *o*:

I am misanthropos and hate mankind;
For thy part I do wish thou wert a dog
That I might love thee something.
—*Timon of Athens*, iv., 3: *Idem.*

In these, the sounds of *h*, *fl*, *st*, *oo*, *w*, *p*, *r*, *a*, *a*, not to speak of *t* and *d*:

As head and heels upon the floor
They floundered all together,
There strode a stranger to the door,
And it was windy weather.

* * * * *

The wild wind rang from park and plain
And round the attics rumbled,
Till all the tables danced again,
And half the chimneys tumbled.
—*The Goose: Tennyson.*

And many examples of balance in these:

Be with my spirit of song as wings to bear,
As fire to feel and breathe and brighten; be
A spirit of sense more deep of deity,
A light of love, if love may be, more strong
In me than very song.
—*The Garden of Cymodoce: Swinburne.*

Sharp and soft in many a curve and line
Gleam and glow the sea-colored marsh-mosses,
Salt and splendid from the circling brine
Streak on streak of glimmering sunshine crosses
All the land sea-saturate as with wine.
—*By the North Sea: Idem.*

The last quotations show us that this balancing of complementary sounds, if continued with too great regularity, may itself become as monotonous as a succession of like tones that are not balanced. Where alliteration and assonance are both used, as in the last quotation from Shakespeare, there is less of this tendency, but even there it may be present.

Let us go on, therefore, to notice in what other ways inartistic effects may be avoided. Of course, the first way of avoiding *balance*, while preserving *repetition*, is to increase the collective instances of *repetition*; and the first result of this would be the effect termed *massing* (see page 3). As explained in "The Genesis of Art-Form," the influence of this effect upon the mind is to call attention to the thought represented in the sounds by a reiteration of them; and, when there is justification for this, massing is allowable. Notice the whispering of the conspirators as represented in the continued repetition of the *s* in the following:

> Who rather had,
> Though they themselves did suffer by it, behold
> Dissentious numbers pestering streets, than see
> Our tradesmen singing in their shops and going
> About their functions friendly.
>
> —*Coriolanus*, iv., 6: *Shakespeare.*

Also the accumulation of the effects of horror in the continued use of the assonant *o* in this:

> All these and thousand thousands many more,
> And more deformèd monsters thousand-fold,
> With dreadful noise and hollow rombling roar,
> Came rushing.
>
> —*Faerie Queene*, 2, 12, 25: *Spenser.*

There is always in this method, however, a tendency to the unnatural and artificial, *e.g.*:

> No foote to foe; the flashing fiër flies
> As from a forge.
>
> —*Faerie Queene*, 1, 2, 17: *Spenser.*

This tendency can be prevented by the method contrasting with it, which is termed on page 3 *interspersion.* This means merely the use of like forms not massed together but separated in some way. Evidently it will lead to results not greatly superior to those illustrated on page 111 unless it be very artistically developed. The artistic development of it, as of all the methods in the same column with it on page 3, is found in considering its connection with that phase of *counteraction, complement, balance, parallelism,* and *alternation* which we have in *complication.* As said in Chapter XIV. of "The Genesis of Art-Form," this word, like *parallelism, continuity,* and many others used in art, is borrowed from one indicating relationships of lines. It means a folding or blending together primarily of these, but, secondarily, of any forms, which, as Charles Blanc says in his "Art in Ornament and Dress," "penetrate, intersect, balance, and correspond to each other, approach to retreat, and touch one moment to depart the next, and dissolve themselves in a labyrinth without outlet and without end. The Arabs have thus realized the strange phenomenon which consists in producing an apparent disorder by means of the most rigid order."

What characterizes this method, is the appearance of one form followed by its disappearance, and the appearance of a second form, or series of forms; then the dis-

appearance of this second form or series of forms, followed by the reappearance of the first form, and so on. Especially does this reappearance characterize the effects of complication when they are blended with those of *continuity*, as should be the case in poetry—an art the medium of which is always a form of movement. It is not necessary to explain in what way complication, as thus employed, involves a blending of the effects of *balance* and *alternation*. In it, instead of having two like sounds of one series followed by two like sounds of another different series, we hear one sound followed by a different one; then a repetition of the same contrast in the same order. If, besides this, the phrases containing the unlike sounds differ in length, especially if their difference cause the sounds to be further apart in one phrase than in the other, then this additional inequality evidently counteracts still further the tendency to monotony. Notice, in the following, the *how* and then the *hounds*, followed by *horn* in the one phrase, and the *rouse* followed by *morn* in the next phrase:

> Oft listening *how* the *hou*nds and h*orn*
> Cheerily r*ou*se the slumbering m*orn*.
>
> —*L'Allegro : Milton.*

Notice in this the *lo* and the *e*, and the contrasts between *herring loves*, *mackerel loves*, and *oyster loves*:

> The h*e*rring *lo*ves the m*e*rry moonl*i*ght,
> The mackerel *lo*ves the wind,
> The oyster *lo*ves the dr*e*dging sang,
> For they c*o*me of a g*e*ntle kind.
>
> —*From "The Antiquary" ; Scott.*

In this the *show* and *sum-*, and *fore* and *come*:

A d*a*y in *A*pril never c*a*me so sweet
To sh*o*w how costly s*u*mmer was at hand
As this f*o*re-sp*u*rrer c*o*mes.
—*Merchant of Venice*, ii., 9: *Shakespeare.*

And the *m* and *u* in both phrases in this:

For *m*en, like b*u*tterflies,
Show not their *m*ealy wings b*u*t to the s*umm*er.
—*Troilus and Cressida*, iii., 3: *Idem.*

We now come to *consonance.* This affords a way of using sounds in accordance with the methods on page 3, which in many cases enables an artist, while fulfilling all the requirements of his art, nevertheless absolutely to conceal it.

As explained in Chapter VIII. of "The Genesis of Art Form," consonance is caused by likeness of effects as produced partly upon the mind and partly upon the senses. In poetic form, it would lead to the use together of sounds allied rather than alike. For instance, *b* and *p* may be said to be allied, in the sense, too, of being consonant. They differ in that *b* has a preliminary sound, and *p* has none. But they are so nearly alike that the mind often confounds them, as is proved in the history of derivations; and so too does the ear, as is proved by the endeavor of a foreigner to imitate the pronunciation of a native word containing one of them. For the same reasons *v* and *f* also are allied and consonant; and so, though less clearly, are all four of these consonants—*b*, *p*, *v*, and *f*. The same thing may be affirmed of *d* and *t*, of *th* (hard), and *th* (soft), and of all four; also of *k* (*c* hard or *q*) and *g* hard; of *j* (*g* soft) and *ch* soft; of *m* and *n*, of *l* and *r*, of *z* and *s*, of *zh* and *sh*, of the consonants *y* and *j*, also of *y* and long *u*. A succession of sounds thus allied is

termed by Professor Sylvester, in his "Laws of Verse," phonetic syzygy.

To confirm what has been said, notice that, in the following, *p*, *b*, *v*, and *f* have almost the same effects as alliteration, but without any suggestion of artificial mechanism such as might result were these letters identical:

> Not to us is given to share
> The boon bestowed on Adam's race.
> With patience bide,
> Heaven will provide
> The fitting time, the fitting guide.
> —*From "The Monastery": Scott.*

> Round thee blow, self-pleachéd deep,
> Bramble roses faint and pale.
> —*A Dirge: Tennyson.*

> I'll frown and be perverse, and say thee nay
> So thou wilt woo, but else not for the world.
> —*Romeo and Juliet*, ii., 2: *Shakespeare.*

> His love was an eternal plant
> Whereof the root was fixed in virtue's ground,
> The leaves and fruit maintained with beauty's sun.
> —*Henry VI*, pt. III., iii., 3: *Idem.*

> Feed not thy sovereign's foe, my gentle earth,
> Nor with thy sweets comfort his ravenous sense.
> *Richard II.*, iii., 2: *Idem.*

So, in the following, notice each *d* and *t*:

> Touch it and take it, 't will dearly be bought.
> —*From "The Monastery": Scott.*

> Thy friends suspect for traitors while thou livest
> And take deep traitors for thy dearest friends!
> —*Richard III.*, i., 3: *Shakespeare.*

If ever he have child, abortive be it,
Prodigious and untimely brought to light.
—*Richard III.*, i., 2 : *Idem.*

These show a resemblance between *l* and *r* :

Have I not heard great ord'nance in the field
And heaven's artillery thunder in the skies ?
Have I not in a pitchéd battle heard
Loud 'larums, neighing steeds, and trumpets' clang ?
—*Taming of the Shrew*, i., 2 : *Idem.*

The following, between *g*, *c*, *ch*, and *th* :

With some fine color that may please the eye
Of fickle changelings and poor discontents
Which gape and rub the elbow at the news
Of hurly-burly innovation.
—*Henry IV.*, pt. 1, v., 1 : *Idem.*

For in revenge of my contempt of love
Love hath chased sleep from my enthralléd eyes.
—*Two Gentlemen of Verona*, ii., 4 : *Idem.*

The following, between *m* and *n* :

O let me not be mad, not mad, sweet heaven,
Keep me in temper. I would not be mad.
—*King Lear*, i., 5 : *Idem.*

And these will illustrate sufficiently what was said of the remaining letters :

Assure yourself, after our ship did split,
When you and that poor number saved with you,
Hung on our driving boat, I saw your brother.
—*Twelfth Night*, i., 2 : *Idem.*

And slow and sure comes up the golden year.
—*The Golden Year : Tennyson.*

There are also allied vowel sounds, like those in *quill* and *quell*, *not* and *what*, *fat* and *fair*, *fan* and *fine*, *their* and *there*, *hall* and *whole*, *but* and *put*, *full* and *fool*, *pull* and *pure*, *lawn* and *loin*, *pool* and *power*, *pair* and *peer*, etc. Notice, besides the assonances in the following, the resemblances between the sounds of *all* and *down*, *darling* and *life*, and *tomb* and *sounding*.

> And so all the night-tide I lie down by the side
> Of my darling, my darling, my life and my bride,
> In the sepulchre there by the sea,
> In her tomb by the sounding sea.
>
> —*Annabel Lee : Poe.*

Notice in this the allied sounds of *o*, *ou*, *oo*, and *u*, as well as how appropriate all of them are to represent the cloud from which the lightnings are shot :

> With iron-worded proof, hating to hark
> The humming of the drowsy pulpit-drone,
> Half God's good Sabbath, while the worn-out clerk
> Brow-beats his desk below. Thou from a throne,
> Mounted in heaven wilt shoot into the dark
> Arrows of lightnings. I will stand and mark.
>
> —*Sonnet to J. M. K. : Tennyson.*

The method opposed to *consonance* which is caused by the conditions of nature is *dissonance*—an effect that may be illustrated, so far as it is inartistic, by the passages on pages 111 and 112, and so far as it is artistic, because representative of the sense, by those on pages 142 and 143. Its artistic accommodation to consonance, viewed as a form of sound, is found—in analogy to what is true of all the methods occupying corresponding places in the columns above it in the chart on page 3—in that phase of *counteraction*, *complement*, and *balance*, which, in this case,

is termed *interchange*. The function of this method as interpreted by its use in music, an art in which the effects of consonance are particularly prominent, is pointed out in Chapter XV. of "The Genesis of Art-Form," as well as in Chapter XV. of the present essay. In these places it is shown that, in passing from one chord to another, the ear, in order to preserve the unity of effect, requires the presence in both chords of an identical note; and that, when, through the second chord, the music enters a different key, it requires what sometimes is, in a sense, an arbitrary introduction into the first chord of a note legitimate only to the second chord.

With this understanding of the function of interchange in music, notice in the following how, in every case, before one series of like tones is ended, another series is begun. The effect resembles—indeed it often includes—that described as *complication*; but it differs because containing nothing necessarily to suggest a regularity of balance, there being no order of sounds in one series which is followed exactly by an order of sounds in a succeeding series. In this passage from Milton, notice how the like sounds of *f*, *b*, *s*, or *w*, and of the *p* as allied to the *b* are thus introduced into other series coming before or after them, and introduced in such a way as to separate them from the series to which, as like sounds, they belong. Notice, also, that, as a result, the sounds of the whole passage are so blended together as to produce a general effect of unity, in exact analogy with that which is done by methods of modulation, as the term is understood, in music.

The air
*F*loats *a*s they *p*ass, *f*anned with *u*nnu*m*bered *pl*umes.
From *br*anch to *br*anch the *s*maller *b*irds *w*ith *s*ong
Solaced the *w*oods and *sp*read the*ir pa*inted *w*ings."
—*Paradise Lost*, 7: *Milton.*

In the following, one principal series beginning with *f*urther ends at *f*luttered; another beginning at f*u*rther ends with m*u*ttered; another beginning with the first th*e*n passes on through the second th*e*n to fri*e*nds; and still another, starting with m*o*re ends at bef*o*re.

> Nothing further then he uttered; nor a feather then he fluttered,
> Till I scarcely more than muttered "Other friends have flown before."
> —*The Raven: Poe.*

Notice the quotation from Tennyson on page 144, as well as the following. Indeed, were it necessary, illustrations of this method could be gathered in abundance from writers of every nation.

> Zwei Blumen, rief er, hört es, Menschenkinder.
> Zwei Blumen blühen für den weisen Finder,
> Sie heissen Hoffnung und Genuss.
> —*Resignation: Schiller.*

CHAPTER XI.

GRADATION, ABRUPTNESS, CONTINUITY, AND PROGRESS AS DETERMINING THE USE OF LIKE POETIC SOUNDS.

Importance, in all the Arts as an Element of Harmony, of Gradation—Logical Connection between it and the Use of Allied Sounds: All Possible Syllable-Sounds can be Graded and Arranged in a Series—So can Words, though Containing both Consonants and Vowels—Degrees of Phonetic Gradation Determined by the Manner of Utterance and Kinds of their Gradation by the Direction of the Changes in Utterance: Analogies between Gradation in Words and in the Musical Scale—Illustrations of Gradation in Verse—Especially in the Accented Syllables—Analogy between One Effect of it and the Discord of the Seventh in Music—Variety in Verse Harmony as Produced by the Combination of all the Methods here Considered—Abruptness in Verse Harmony—Transition and Progress—Examples.

MORE subtle methods of securing verse-harmony still remain to be considered. In the list of these on page 3 under and after *consonance*, we shall find *gradation*, *abruptness*, *transition*, and *progress*—all of which, as will be shown presently, fulfill very important artistic functions, not only in connection with music, but also with poetry. There is a kind of harmony resulting from mere consonance; but this would give no more than the notes of the common chords for a gamut of music, colors as widely separated as the primary, or the secondary, or the complimentary, for a gamut of pigments, and only like or allied alliterations, assonances, or rhymes for a gamut of verse. But in all three arts,

gamuts are constructed upon the principle of gradation. The result is melody in music, tone in painting, and a corresponding effect in poetry, that is now to be explained.

The reason in nature for using gradation was stated on page 268 of "The Genesis of Art-Form." The reason for developing its possibilities in either of the arts of sound follows logically from what has been said of allied sounds. If one sound be allied in one way to a second sound that differs from it slightly, why cannot this second be allied in an analogous way to a third, and the third to a fourth? The moment that we ask this question an affirmative answer is suggested, and we find that we can arrange the sounds of the consonants and also of the vowels in a graded scale in which they all differ from one another in approximately similar degrees, each produced by a movement of the vocal organs a little further in the same direction as that in which they were moving when pronouncing the sound next before it. For instance, starting the articulation as far back in the mouth as possible, we can get a series represented—approximately, in a case where it is mainly necessary to consider the effect upon the ear—in the sounds of the initial letters of the following: *hay, keep, jar, chaise, shall, you, roll, lune, dole, toll, zone, (a)zure, soon, noon, this, thin, moon, bat, pop, van, fan, way, whey.* The same order of utterance applied to the vowel-sounds, irrespective of their associated consonants, will give us a series like long *oo, o, i, a, e.* To extend this including short-vowels and diphthongs, will give us a series something like the sounds heard in *moot, foot, bone, bound, boil, dawn, fall, file, far, fair, but, bat, bail, met, it, eat.*

Of course, in actual words, consonants and vowels are

usually joined, and, in the same syllable, the vocal organs in passing from one to another consonant-sound, may move in one direction; and in passing from one to another vowel-sound, they may move in another direction. But this fact, while it complicates the application of the principle, does not make it impossible; and frequently, by suggesting likeness through the sound of one letter and unlikeness through the sound of another, introduces complementary effects of the most artistic character. Words as words, sometimes on account of their consonants, sometimes on account of their vowels, sometimes on account of the blendings of both, can be arranged so that the order of the articulation of tones from the back to the front of the mouth, or the reverse, shall continue to be the same.

What has been said implies that there are two applications of this method of *phonetic gradation.* The first causes each of a series of sounds to differ from the one nearest it in a like degree. The second causes it to differ by a movement of the organs in a like direction. Of the two, the second is the more important; and it is worthy of notice that the same is true of these methods as applied to the use of musical scales. Gradation performs a more important office in guiding the general direction of the voice upward or downward, than in leading it upward or downward by regular degrees.

If we examine our popular poetry we shall be surprised to find how full it is of this phonetic gradation, to which, as it has never been an acknowledged poetic effect, we can only suppose that delicate taste and a desire to provide for ease of utterance have led the poets unconsciously. Look at these verses. The music and charm of them everybody recognizes. Now notice how largely

the effect is produced by the gradation of the sounds. This is perfect in the accented vowels of the first and of the second lines, in the accented consonants preceding the vowels of the third line, and in both vowels and consonants in each of the two halves of the fourth line.

Tell me not in mournful numbers
  Life is but an empty dream,
For the soul is dead that slumbers,
  And things are not what they seem.
—*The Psalm of Life : Longfellow.*

Notice the gradation in the accented syllables of each of these lines:

Till death have broken
Sweet life's love token,
Till all be spoken
  That shall be said,
What dost thou praying,
O soul ! and playing
With song and saying
  Things flown and fled ?
—*Anima Anceps : Swinburne.*

Who rowing hard against the stream
Saw distant gates of Eden gleam[1]
And did not dream it was a dream.
—*Two Voices : Tennyson.*

The *was* in this last line prepares for the closing of the series of gradations in very much the same way as the discord of the seventh that precedes the last note of a musical melody. Notice, too, how the sounds move forward or backward in each of the phrases of the following:

O such a deed
As from the body of contraction plucks
The very soul ; and sweet religion makes
A rhapsody of words.
—*Hamlet*, iii., 4 : *Shakespeare.*

[1] Between *d* and *g*, each used twice.

Finally, notice in this, a combination of gradation and of balance, through effects in succession of long *u*, broad *a* or *oi*, and *ou*:

> And T*u*mult and Conf*u*sion *a*ll imbr*oi*led
> And Disc*o*rd with a th*ou*sand various m*ou*ths.
> —*Paradise Lost*, ii. : *Milton.*

Abruptness, as distinguished from gradation, needs no further illustration than is given in the quotations on page 112. The following might be termed artistic *abruptness* intended to represent the sense:

> Though the yesty waves
> Confound and swallow navigation up;
> Though bladed corn be lodg'd, and trees blown down;
> Though castles topple on their warders' heads;
> Though palaces and pyramids do slope
> Their heads to their foundations; though the treasure
> Of nature's germins tumble altogether,
> Ev'n till destruction sicken,—answer me
> To what I ask you.
> —*Macbeth*, iv., 1 : *Shakespeare.*

Transition is the result when, through methods of *interchange*, described on page 160, series of what we may term principal sounds are made to pass into one another in such ways as to continue, notwithstanding abruptness, the effect of unity as in *gradation* and yet secure that also of artistic *progress*. In the following notice how a principal long *i*-sound, through a subordinate short *o*-sound interchanged with it and the short *e*-sound, passes into a principal long *o*-sound, then into a principal long *e*-sound, then into a principal long *o*-sound, and then into a principal long *u*-sound:

In the *s*ilence *o*f the *n*ight
*H*ow we shiver with affr*i*ght
At the *me*lanch*o*ly *me*nace of their t*o*ne!
For *e*very sound that fl*o*ats
From the rust within their thr*o*ats
Is a gr*o*an.
And the p*e*ople—ah, the p*e*ople—
They that dwell up in the st*e*eple
All al*o*ne,
And who, *t*olling, *t*olling, *t*olling,
In that *m*uffled *m*onot*o*ne,
F*ee*l a gl*o*ry in s*o* r*o*lling
On the h*u*man heart a st*o*ne,
They are n*ei*ther man nor w*o*man,
They are n*ei*ther br*u*te nor h*u*man,
They are Gho*u*ls.

—*The Bells: Poe.*

Notice similar methods of transition in the following, and how much more subtle and, because the method is concealed, how much more artistic and satisfactory is its music than that which is produced according to the more common and apparent methods represented on pages 122 to 130:

F*o*llow'd with *a*cclamation, *a*nd the *so*u*n*d
Symph*o*nious of *t*en *t*h*o*usand harps that *t*uned
Ang*e*lic h*a*r*m*onies; the *e*arth, the air,
Res*o*u*n*ded.

—*Paradise Lost*, vii: *Milton.*

For the m*oo*n never b*ea*ms without bringing me dr*ea*ms
Of the b*ea*utiful Annabel L*ee*,
And the st*a*r*s* never r*i*s*e* but I f*ee*l the br*i*ght *e*yes
Of the be*a*utiful Annabel L*ee*.
And so all the n*i*ght-t*i*de *I l**ie*** down by the s*i*de
Of my d*a*rling, my d*a*rling, my l*i*fe and my br*i*de,
In the *se*pulchre th*e*re by the s*ea*,
In her t*o*mb by the *sou*nding *se*a.

—*Annabel Lee: Poe.*

CHAPTER XII.

ANALOGIES BETWEEN THE USE OF QUALITY AND PITCH IN POETRY AND MUSIC.

Each of these Arts Developed Independently, yet Sounds as Used in Both are Connected—Every Vowel Has a Quality of its Own—Also a Pitch—Not Essential for our Purpose to Know what this Pitch Is—Only the Fact—In Passing from One Word to Another we Pass to a Different Pitch, and in Using Different Vowel and Consonant Sounds Together in One Word we Produce Effects Allied to Chords—These Effects Augmented by Upward and Downward Inflections Used in Reading, Causing Analogies to Musical Melody and Harmony—Different Kinds of Verse-Melody Produced by Different Arrangements of Sounds and Accents—Tunes of Verse as Determined by the Rhythm—Illustrations—Melody and Harmony, though Existing in Both Poetry and Music, Are Different in Each Art—Every Possible Pitch of the Voice can be Used in Poetry; Only Notes of Some Selected Pitch in Music—The Cause of this Difference to be Found in the Difference between the Expressional Possibilities of Articulated and Inarticulated Sounds—Early Musicians did Not Know all their Reasons for Constructing Musical Scales—But, Judging by Effects, were Led, as is Now Known, in All Cases to Put together Like Partial Effects of Unlike Complex Wholes.

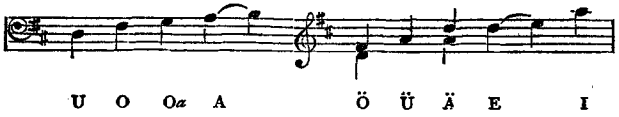
IT is natural to suppose that the laws of sound work analogously in poetry and in music, but as, historically, each of these arts is developed in accordance with independent tendencies of its own, it has been thought best up to this point to treat poetry precisely as would have been done, had music never existed. But one object of this series of essays is to show the correspondences between the arts; and on this account not only, but because

of the way in which the known facts of music confirm many of the statements already made here, it seems important to add a few words showing in what sense quality and pitch, and the melody and harmony resulting from them, exist in both arts and are subject to the same laws, though these are manifested in each of them, because designed for a different purpose, in a different way.

As stated in Chapter VIII. of "Poetry as a Representative Art," where the fact was mentioned in order to show the significance of the sounds of speech, instruments have been constructed by means of which sounds can be analyzed and their component tones distinctly and definitely noted. As a consequence, it has been found that every vowel has a quality of its own different from that of any other vowel. But quality, as will be shown in Chapter XIII., is determined by the pitch of different partial tones which are blended with the prime or principal tone, and which enter into it as component parts.

If, therefore, every vowel have a quality of its own, does it not follow that it must also have a pitch of its own? This question was answered in the affirmative some years ago by Donders, who discovered that the cavity of the mouth, when whispering each of the different vowels, is tuned to a different pitch. Accordingly, the voice, when pronouncing vowel-sounds, at whatever key in the musical scale it may start them, has a tendency to suggest—if not through its main, or what is termed its *prime* tone, at least through associated, or what are termed its *partial* tones—that pitch which is peculiar to the vowel uttered.

Exactly what this pitch is, in the case of each vowel, it is not important for us to know here. In fact, it has not yet been definitely determined. Helmholtz, in his "Sen-

sations of Tone," Part I., Ch. V., says that the series, which may be represented in English by *a* in *father*, *a* in *man*, *e* in *there*, and *i* in *machine*, forms an ascending minor chord of *G*″—thus: *d*‴—*g*‴—*b*‴ *flat*—*d*⁗; and the following represents the results of Merkel's experiments with the German vowels given in his "Physiologie der Menschlichen Sprache," page 109:

All that concerns us at present is the fact that there is a pitch peculiar to these vowels. By consequence, when different vowel-sounds are heard, sounds of different pitch are heard, or at least suggested. But besides this, the consonants, especially the sonants, *m*, *n*, *l*, *y*, *r*, *b*, *v*, *d*, *j*, *g*, *w*, *th*, *z*, all necessitate some pitch when they are pronounced, and it is not likely to be the same as that suggested by their accompanying vowel.

From these facts two inferences follow: First, that whenever two syllables, whether containing sounds of different vowels or consonants or of both, are uttered in succession, we have a succession of tones that differ in pitch. This is the same as to say that whenever we use consecutively words that are not pronounced exactly alike, we produce, in just as true a sense as when singing a melody, an effect of passing from one pitch to another. The second inference is that whenever sounds of two different vowels or of vowels and consonants that constitute a syllable are uttered simultaneously, they produce a blending of tones that differ in pitch, or, in other words, an effect corresponding to that which is heard in musical harmony. Indeed, the music of the speaking voice, as distinguished from the singing, is characterized mainly by the harmony

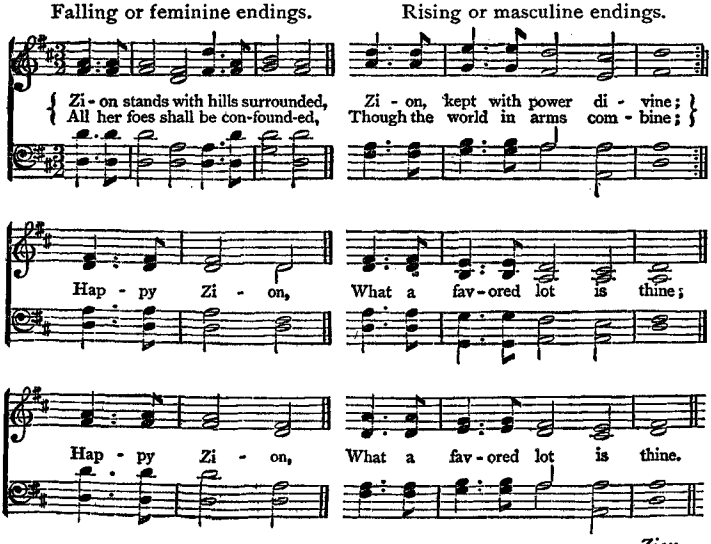
that results from this blending of the consonant-sounds with the vowel-sounds, the latter being often in singing the only sounds that are heard, and always the only sounds that are made prominent. Of course, too, there is a sense in which the utterance of the component parts of any single syllable, especially when these are the two vowels of a diphthong, resembles more an effect of quality than of harmony. But sometimes, as in the case of an inflection which begins at one pitch and ends at another, there are suggestions of harmony. Moreover, it is to be noted that at all times, as will be shown in Chapter XV., the effects of quality and of harmony are in their sources identical.

The facts just mentioned are somewhat subtle in their nature, and the reader may find it difficult to recognize their application to our present subject. We now pass on to other facts, so apparent that they are generally recognized. They are connected with the emphasis that every man, in talking or reading, gives to his utterances. By means of this, he causes his words to slide upward or downward in pitch, or he keeps them at the same pitch. This kind of emphasis, as pointed out in Chapters II. and VIII. of "Poetry as a Representative Art," is so closely analogous to the effects of musical melody that it is generally considered to be the cause of them. (See the music on page 172.) In the same chapters, as also in Chapters III. and IV. of "Music as a representative Art," the particular phase of thought represented through each of the different movements is also explained. This part of the subject is not relevant to our present discussion. But a consideration of the movements themselves is relevant. For however dull the inexperienced ear may be in recognizing the elements of melody and harmony that have already been pointed out, none can fail to perceive in the emphatic elocutionary rising and falling of the voice,

that which resembles a melody, nor in the long inflection on a single syllable, like *an* perhaps, beginning with a vowel and ending with a consonant, that which suggests at least the blending of tones in harmony.

The bearing of what has been said is that the arrangement of words and of their accents so as to produce certain definite kinds of versification and metre, while doing this, gives to the verse at the same time certain definite effects of melody and harmony. In Chapter IX. of "Poetry as a Representative Art," attention was directed to the fact that the pitch of the voice is usually highest on its accented syllable. The first syllable of *cónjure*, for instance, is higher than the second. The second of *conjúre* is higher than the first. Accordingly,

Lines ended with like effects of pitch in the melody both of the music and verse.


Falling or feminine endings.
Rising or masculine endings.
Zi - on stands with hills surrounded,
All her foes shall be con-found-ed,
Zi - on, kept with power di - vine;
Though the world in arms com - bine;
Hap - py Zi - on,
What a fav - ored lot is thine;
Hap - py Zi - on,
What a fav - ored lot is thine.

Zion.

unless there be some reason in the sense for changing this rule, the voice, in reading verse consecutively, makes a downward movement when the last syllable of a line is unaccented, and an upward movement when it is accented. Notice the music and words on page 172, which are taken from page 106 of "Poetry as a Representative Art":

A corresponding principle applies to the accents or lack of accents at the beginnings of lines. Accordingly, a different way of closing or opening a line, or the lengthening or shortening of it, necessitates a decided difference in the tune of the verse; and when we consider how possible it is, even in the same poem, to change a metre from double to triple and quadruple, and from initial to terminal, median, and compound, as well as to alter the relative number of feet in the lines, it is evident that the opportunities for varying these tunes are practically infinite. Observe how dissimilar they are in the following:

Three years she grew in sun and shower
Then Nature said: "A lovelier flower
On earth was never shown;
This child I to myself will take;
She shall be mine, and I will make
A lady of my own.
—*The Education of Nature: Wordsworth.*

Memory's finger,
Quick as thine,
Loving to linger
On the line,
Writes of another
Dearer than brother:
Would that the name were mine.
—*Thread and Song: J. W. Palmer.*

Ah, sad and strange as in dark summer dawns
The earliest pipe of half-awakened birds

To dying ears, when unto dying eyes
The casement slowly grows a glimmering square:
So sad, so strange, the days that are no more.
—*The Princess: Tennyson.*

Thy sidelong pillowed meekness;
Thy thanks to all that aid;
Thy heart in pain and weakness
Of fancied faults afraid;
The little trembling hand
That wipes thy quiet tears,—
These, these are things that may demand
Dread memories for years.
—*To a Child during Sickness: Leigh Hunt.*

Come in the evening or come in the morning;
Come when you're looked for or come without warning;
Kisses and welcome you'll find here before you,
And the oftener you come here, the more I'll adore you.
—*The Welcome: Thomas Davis.*

O whistle and I'll come to you, my lad,
O whistle and I'll come to you, my lad;
Tho' father and mither and a' should gae mad,
O whistle and I'll come to you, my lad.
—*Whistle and I'll Come to You: Burns.*

Scots wha hae wi' Wallace bled,
Scots wham Bruce has aften led,
Welcome to your gory bed,
Or to glorious victorie!
—*Bannockburn: Idem.*

'T is for this they are dying where the golden corn is growing,
'T is for this they are dying where the crowded herds are lowing,
'T is for this they are dying where the streams of life are flowing,
And they perish of the plague where the breeze of health is blowing.
—*Ireland: D. F. MacCarthy.*

Notice also this same fact as brought out by the illustrations of different kinds of rhythm given on pages 61 to 89.

Thus far, we have found that poetry and music are alike in that both contain melody and harmony. But when we attempt to go beyond this, and to inquire in what ways melody and harmony are manifested in each, we find great differences. This discovery is important, not only on its own account, but, as we shall find in another place, on account of the light that it throws on the correspondences which we should expect to exist between harmony of sound and of color. That which connects the arts is the unity of method underlying them. In each of them this method is applied to a different germ. By keeping this fact in mind we shall be able to recognize, as would otherwise be impossible, in what sense the effects of harmony in all the arts are secured in ways essentially the same.

The elements causing poetic harmony differ from those causing musical harmony in this—that while any possible tones can be used in verse, only certain selected tones can be used in music, *i. e.*, in the art of music as we now know it. Science has ascertained that all tones whatever result from vibrations. Authorities differ, but, according to Helmholtz, about 33 of these vibrations in a second are necessary in order to render satisfactorily distinct the lowest musical tone, and about 3960 render so the highest. Between these two extremes it is conceivable that there should be 3927 different degrees of pitch. Of these degrees music uses only about eighty-four, twelve degrees, including whole and half notes, being employed in each of about seven octaves. As for the speaking voice, its range extends neither so low nor so high as that of instrumental music; nevertheless it can use a very much larger number of notes. Suppose that we limit its range to two octaves, and take for the lowest note the low C

of the tenor voice,[1] representing 132 vibrations a second, and for the highest note the C two octaves above this, representing 528 vibrations a second. This leaves, between the two notes, 396 distinct degrees of pitch, and the reading voice is at liberty to use all of these. But the singing voice within the same range can use only twenty-four of them.

What is the cause of this difference? Why, within these limits, are the possibilities of pitch in poetry practically unrestricted, and in music restricted so greatly? Undoubtedly it is connected with the fact that, in the one, words are used, and in the other, at least in instrumental music, sounds without words. It would be possible, of course, in all cases to add music to verse, that is, to chant all poetry, as well also as to add words to melody, and to articulate all music. But this is not done, evidently because artists think it unnecessary. Poetry is felt to be one art and music another. In the first art words are used; and these, owing to their articulation, are easily distinguished, and, if similar, easily compared. Alliteration, assonance, rhyme, phonetic gradation in connection with accent, metre, and versification, furnish as many opportunities for *grouping the like partial effects produced by unlike complex wholes* as this art needs. But when, as in music, especially in that which is instrumental, the artist is compelled to use sounds that are not distinguishable by articulation, he is obliged, if his effects be aimed above the level of the rhythm produced by the taps of a drum, to make more of quality and pitch. In poetry these latter, although, as we have found, necessarily involved in articulation, are accidental and secondary.

[1] This is merely a supposititious case. Most voices, whether male or female, have their lowest note on an E, F, G, or A, rather than on C.

In music, they are essential and primary. It may be said that, if it were not for them, there could be no music at all, as we know it; and this for the very sufficient reason that, without them, like or allied elements could not be grouped together in sufficient numbers to constitute an art-form.

Of course, the early musicians could not have explained exactly why they selected certain notes and put them into a musical scale, and from these began to develop that which has now come to be our elaborated system of melody and harmony. Those artists followed merely the instincts of their æsthetic nature. This prompted them, in constructing forms, to select sounds that would naturally go together; and to use these and these only.

But what connection is there, it may be asked, between sounds that naturally go together, and those that go together because certain of their effects are alike? None, perhaps, so far as the first musicians were aware. They judged merely by the results that they heard, and had only a limited knowledge of the causes of these. Nevertheless, as will be shown presently from an examination of the discoveries of modern science, their ears guided them aright. All the notes of the scale, and all the methods of musical harmony owe their origin to a literal fulfilment of the art-principle declared in "The Genesis of Art-Form" to be of universal applicability. This principle is that in order to receive an impression of unity, the mind *groups complex wholes by putting those together that produce like partial effects.*

CHAPTER XIII.

MUSICAL MELODY AND HARMONY, AS DEVELOPED HISTORICALLY ACCORDING TO THE METHODS OF ART-COMPOSITION.

The Best Results of Quality, as Exemplified in the Human Voice and Instruments, Produced by a Blending of Like Effects—In Pitch, the Same is True—But to Understand the Subject Thoroughly, we should Know the Causes of Quality and Pitch—The Note and Half-Note—Written Music: the Staff—Treble Clef—Bass Clef—C Clef—Sharps and Flats—Music among the Greeks—How Developed by Effects of Comparison, First by Way of Congruity—The Gregorian Chant an Endeavor to Imitate the Speaking Voice—Intonation is Based on Comparison by way of Repetition—Melody, Developed from this, is Based on Comparison by way of Consonance: Pythagoras and the Origin of Musical Scales—Variety, Introducing Contrast, Incongruity Alteration, and Dissonance, Necessitates, for Unity of Effect, Complement, Balance, Alternation, and Interchange—Octaves as Sung Together by the Greeks, a Form of Parallelism—Polyphonic Music, as Developed from this, and from Methods of Alternation, Complication, and Interchange—Harmonic Music Developed by a Renewed Application of the Methods of Order, Principality, etc.—Causes of the Rise of Harmonic Music.

MUSICAL tones may be divided according to their quality into those produced by the human voice and by manufactured instruments. The latter may be either instruments of percussion like drums and cymbals, stringed instruments like pianofortes and violins, or wind instruments, which latter may either have flue-pipes, like flutes and organs, as a rule, or reed pipes, like clarionets, and oboes. There is no need of stopping here to describe

these different instruments. It is enough to say that where consecutive single notes are used, we are best satisfied if all or a large number of those that are essential to the same melody are produced by an instrument of the same kind, thus fulfilling the principle of putting like elements of sound together. For instance, even were it possible, we should hardly take pleasure in hearing a first note of a melody sounded on a violin, a second on a flute, a third on a pianoforte, etc., and this because the effect would lack *congruity*, which, as shown on page 3, is the first condition enabling the mind to compare the qualities of successive tones, and thus perceive unity in them. If, however, instead of consecutive single notes, we hear consecutive chords, then, provided the same part be played in consecutive chords by the same instrument, the more numerous the kinds of instruments used, the more pleasure, as a rule, do we receive. A chorus, accompanied by an orchestra, is usually more enjoyable than a single voice accompanied by a piano, and the latter is more enjoyable than a voice unaccompanied by any instrument. The reason is (see "Art in Theory," Chapter XIII., page 160) that in the chord of the orchestra the ear recognizes, and is able to compare, a much larger number of like or allied effects. Moreover, as all these instruments are sounded in successive chords, their music continues to preserve from note to note the same general compound quality, notwithstanding the variety caused by differences of pitch in the notes of each chord and of successive chords. It is because the effect of *unity*, together with that of the greatest possible *variety*, is attained in this complex form of music as in no other, that the orchestra and chorus combined is generally supposed to exemplify the highest possibilities of the art. (See page 3.)

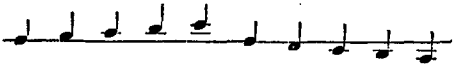
This fact, so apparent with reference to quality, is equally apparent with reference to pitch. Of the hundreds of possible degrees of it between the A of one clef and, say, the A, two octaves above this, which is the ordinary range of a soprano voice, and, therefore, usually the range of the notes of a melody also, only twenty-four can be used; and of these, as a rule, only fifteen represent the regular notes of the scale as actually used. Of the fifteen, moreover, few melodies use all, the most of them being confined to only four or five notes in addition to those contained in a single octave. But if a melody be confined to ten or a dozen notes, every one of these must be repeated often; in other words, the form of the melody must reveal a very large number of like or allied factors. An analogous statement, too, for analogous reasons, may be made of the harmony accompanying such a melody.

These are facts which all recognize. But their bearing upon the laws underlying the development of melody and harmony cannot be understood, unless we begin at the bottom of our subject, and explain, as far as possible, what it is that causes the differences observable in the quality, or, as usually called, the timbre of sounds,—what it is, for instance, that makes the human voice sound unlike a flute, and a flute unlike a violin or a pianoforte. But such explanations in their turn would be unintelligible to one who did not understand something about musical pitch and notation as well as a little about the history of music. Let us turn aside, then, for a while, even at the risk of repeating what is well known to all but the unmusical, in order to consider these.

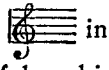
As for pitch, we all know that, when one is singing, his voice usually goes higher and lower than when he is talking. We know too that musical instruments are made to

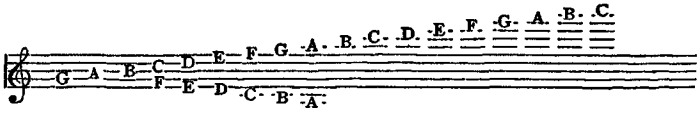
sound higher and lower than the speaking voice. Pitch, therefore, is a very important factor in music. Because it is so, and in order to indicate clearly any changes that may be made in it, there has come to be a canon in musical art that a note shall glide into another at a different pitch not by imperceptible degrees, as is the case in speech, but—aside from occasional violin-effects—perceptibly and by degrees which all musicians have agreed in using. These degrees are separated from one another by intervals, as they are termed, of a whole note or a half note. Seven of these degrees, all except two of which are separated by intervals of whole notes, constitute what is known as the musical scale (from the Latin *scala*, a ladder). Certain definite degrees of pitch, which musicians represent by the letters C D E F G A B C, correspond exactly to the notes of this scale. Between C and D, D and E, F and G, G and A, and A and B, there are also half-notes that are sometimes used, making eleven sounds in all between C and C. The lowest of this series of sounds is the highest C in a scale below it, each note of which lower scale is just an octave, as it is called, lower in pitch than the note represented by the same letter in the higher scale. In instrumental music, about four scales or octaves are used below the middle C, the approximate pitch of which is established by mutual agreement; and about three scales are used above it.

In writing music, a line was formerly used to represent a certain pitch, and notes of a higher pitch were indicated in spaces or on broken lines above this, and notes of a lower pitch below it, *e.g.*:

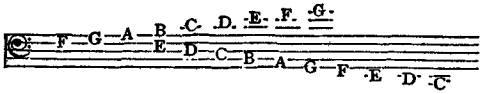


At present, five parallel lines, termed a staff, are used, with broken lines, if necessary, above or below the staff. Notice the staves on this page.

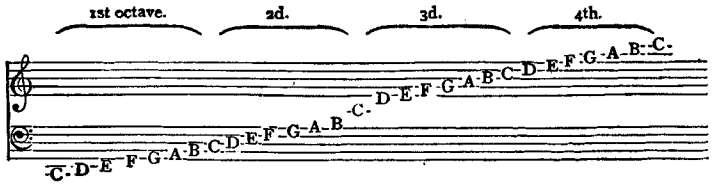
The figure  indicates the treble-clef, as it is called; or the sol-clef, by which is meant that the line encircled by the main curve of the figure represents the pitch of the note *sol* in that scale the *do* of which is at middle C. It is also called the G clef, because the line encircled represents the pitch of the lower G used by a soprano voice in singing. Calculating from this G, it is easy to determine the pitch represented by the other lines and spaces, *e. g.*:



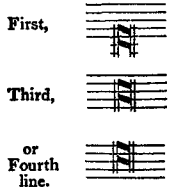
The figure indicates the bass clef, as it is called, or the fa-clef, because the main curve of the figure is made about the line representing the note *fa* in that scale the *do* of which is at the lowest C ordinarily used by the male voice. It is also called the F clef because this curve is made about the line representing the middle F used by the bass voice. The notes above and below this are then as follows:

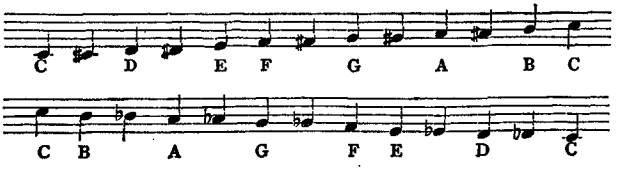
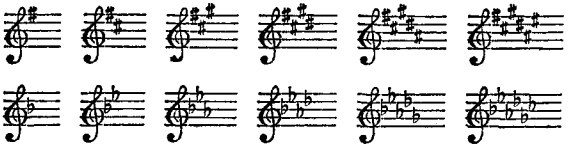


The G clef and the F clef together enable us to write out all ordinary music, *e. g.*:



Besides these, a *do*-clef or C clef is sometimes placed on either the first, third, or fourth line of the staff; and indicates that the note C is on the line which it incloses. When on the first line the clef is also called the soprano; when on the third line, the alto; and when on the fourth line, the tenor.



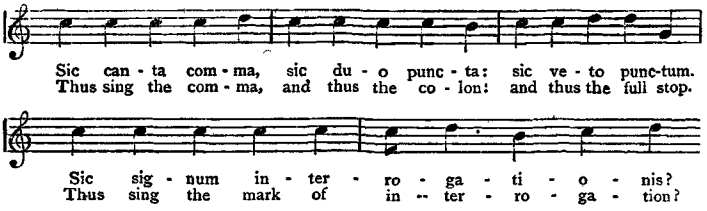
To this it may be well to add that, whenever it is desired to use the half tones between C and D, D and E, and so on, one of two different courses is adopted. Either a sharp, represented thus ♯, is placed on a line or space, indicating that the note to which it is attached is to be sounded half a tone above where it is written; or a flat, represented thus ♭, is placed on a line or space, indicating that the note is to be sounded half a tone below where it is written. In printed music, the two following arrangements represent the same notes, the one moving up the scale, the other down.

These sharps or flats, when used uniformly throughout a composition, are placed at the beginning of the staff and not before each note, as in the example just given; *e. g.:*

When a sharp or flat has been used on a line or space, and a following note is not intended to be made sharp or flat, a character termed a natural ♮ is used to indicate this fact; *e.g.:*

This brief explanation of musical notation will prepare us to go back as far as is possible, to the beginnings of music, and notice certain different stages in its history which will enable us to understand why it has developed as it has. The Greeks chanted or sang their poetry. The accents (from *ad* and *cano*, to sing to) used with their words indicated, as do elocutionary marks with us, the movements of their voices in doing this. "We must remember," says A. J. Ellis, in one of the notes to his translation of Helmholtz's work on "The Sensations of Tone," page 366, "that the Greek and Latin so-called accents consisted solely in alternations of pitch, and hence to a certain extent determined a melody. See Dionysus of Halicarnassus *περὶ συνθέσεως ὀνομάτων*, Chapter XI." But if the written accents in Greek and the accents as determined by the rules of grammarians in Latin are carefully examined, it will be found that every line in a Greek

or Latin poem had its own distinct melody, the art of the poet being shown by the great variations in pitch which he was able to combine with a certain quantity or rhythm. "It would not be difficult," adds Ellis, on page 367, "for any one with a little musical skill and the help of a common Greek lyre, to extemporize (*i.e.* in reciting an ordinary Greek stanza written with accents) an effective *recitative*, especially if the rising and falling intervals were varied." Undoubtedly in the early forms of music, inasmuch as the voice was required to harmonize with only certain simple and single notes sounded on the lyre, each singer could lengthen and shorten his inflections at will, and thus vary his melodies in ways not allowable in modern music.

Here we find indicated, as nearly as can be, the conditions of things when music as an art began. Notice how they accord with what was unfolded in "The Genesis of Art-Form." There it was shown that the mental desire of the mind for *unity* first manifests itself in the direction of *comparison*, resulting in an endeavor, so far as possible, to put like effects with like. It was also shown that comparison first manifests itself by way of *congruity*, resulting from grouping forms together because representative of like *significance*. Would it not be strictly in accordance with this fact that the beginnings of artistic unity in these early Greek melodies would be determined by the fitness of certain like effects in them to express certain like sentiments, such as those of joy or sadness, triumph or despondency? Plato's "Republic," III., 10, indicates clearly that they were so determined. The fact, too, that they grew out of the requirements of recitation would necessarily cause the movements of the tones to resemble the intonations natural to the voice in speaking the words

used. And what is true of the Greek melodies is true, so far as can be ascertained, of all primitive and original forms of melody. The Gregorian chants contain rules like the following:


Sic can - ta com - ma, sic du - o punc - ta: sic ve - to punc-tum.
Thus sing the com - ma, and thus the co - lon: and thus the full stop.
Sic sig - num in - ter - ro - ga - ti - o - nis?
Thus sing the mark of in - ter - ro - ga - tion?

Whether Pope Gregory (A.D. 590 to 604), originated these methods, or derived them from Pope Sylvester (A.D. 314 to 335), as is sometimes said, or from St. Ambrose (A.D. 341 to 397), or whether all of these derived them from the ancient Romans or Greeks,—in any case, that desire to imitate the natural intonations of the speaking voice, to which they owe their origin, is very apparent. A similar desire has evidently actuated composers wherever there has been a fresh development of the possibilities of melody, as is exemplified not only in the *recitativos* of Giacomo Peri of the sixteenth century, but in the operas of Wagner of our own time.

While this is the case, however, melody, when once originated or started in a new direction, soon gets beyond imitating the intonations of speech. Variations of pitch, when made to differ at all from those used in talking, soon come to differ from them, if not entirely, at least greatly, and this for the sake of the tune. Now what is the earliest form of tune? As stated in "Art in Theory" Chapter XX., the fundamental difference between song and speech is the same as between sustained tones and unsustained. The earliest form of tune is that of the *recitative*,

in which the voice begins to chant the words and prolong them, as in what we term intonation. What is the chief characteristic of intonation? Look back at the Gregorian chant. Listen to the service in ritualistic churches. Its chief characteristic is repetition. The same artistic tendency that leads the voice to dwell on the tone, leads it to dwell on like tones. Comparison by way of congruity passes thus, as we should expect, first of all into comparison by way of *repetition.* See page 3.

After a time, however, but much later, intonation is developed into the completed artistic form of melody. The basis of this is comparison by way of *consonance*, including, however, much both of *congruity* and *repetition.* Quite early in the history of Greek music we find Pythagoras (B.C. 540 to 510) asking the reason of the laws of musical *consonance*, showing that, even in his time, interest was taken in the relations of pitch irrespective of *congruity* or the sentiment represented by them, or of the *repetitions* of intonation. Pythagoras had learned, as well probably from the Egyptians as from his own experiments, that strings of different lengths but of the same substance, when subjected to the same strain, would give perfect consonances if their respective lengths were in the ratio of 1 : 2, 2 : 3, or 3 : 4. Later physicists have extended this law to apply to the ratios 4 : 5 and 5 : 6, but, with what he knew, Pythagoras constructed a musical scale containing four of the notes used in our scale of today. Subsequently (see page 203), he extended his scale until it contained seven notes differing somewhat, yet not greatly, from the seven represented by our own C D E F G A B C. To the notes of the scale, Guido of Arezzo, a Benedictine monk of the eleventh century, gave the names *ut, re, mi, fa, sol, la, si,* and *ut,* taking the first six

of the names from the initial syllables of six successive lines of a hymn to St. John, which lines happened to begin on the six successive notes of the scale, now named after them. These are the lines:

Ut queant laxis
Re-sonare fibris
Mi-ra gestorum
Fa-muli tuorum
Sol-ve polluti
La-bii reatum, etc.

To these syllables Guido added *si*, and subsequently *ut* was changed to *do*. This was the origin of the solfeggio, as it was called, and which still exists in our *do*, *re*, *mi*, *fa*, *sol*, *la*, *si*, *do*.

So much for the names used in the scale. But we have not yet explained why its notes are pitched as they are. To do this, necessitates our tracing further the influence in this art of the methods underlying composition. The chart on page 3 will show that, as affected by the variety in nature, *comparison*, *congruity*, *repetition*, and *consonance* are, respectively, opposed by *contrast*, *incongruity*, *alteration*, and *dissonance*. Undoubtedly, to avoid these latter effects is the unconscious reason underlying the very great likeness of tone that characterizes intonation. For what is intonation, as mainly employed in our own day, but an expression of formalism carried to its extreme? What is it but the result of a desire to secure almost absolute unity of impression in the church services? But when there is a departure from absolute unity by the admission into the form of *contrast* and methods allied to it, there is, as we have found, no longer in any of the arts any possibility of unity of effect, aside from the use of the methods in the third column in the list on page 3, namely, *counter-*

action, *complement*, *balance*, *parallelism*, *alternation*, and *interchange*, which last in connection with *consonance*, develops into completed harmony.

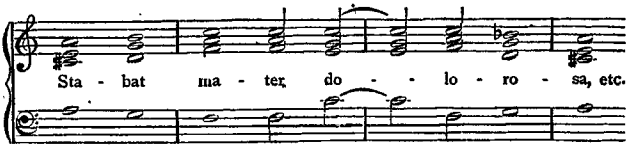
The beginnings of the latter condition among the Greeks are indicated as follows. Aristotle asks (Problems xix., 18): "Why is the consonance of only the octave sung?" and again (Prob. xix., 39): "This singing occurs when young boys and men sing together, and their tones differ as the highest from the lowest of the scale." Owing to passages like these, scholars have held that the Greek chorus was what is generally termed homophonic; or, in other words, that it had no harmonies in the broad sense in which the word is now used—only such consonances as can be produced by the use of the octave. Their men could sing at the same time as their boys and women, but all had to sing the same part, though separated by an octave—furnishing thus, as will be recognized, a perfect exemplification of musical *parallelism*. It is not necessary to suppose, however, that harmony was entirely lacking in the Greeks' instrumental, or even vocal, music. The strings of their lyres would sometimes be sounded together, if only by accident. This would produce a chord. A chord, once heard, would be repeated. Therefore chords probably accompanied the Greeks' singing. But, ignorant, as they were, of the laws of harmonic sequence, their chords, except as accompaniments to a melody, would not produce unity, or even consonance of effect. This is probably why Plato, in the "Republic," III., 11, enjoins simplicity in music, and the subservience of harmony and rhythm to the sentiment expressed in the melody. See "Art in Theory," Ap. II., pp. 250 and 251.

Music like that of the Greeks, in which there was only a slight development of what we should term

harmony, continued until the middle ages. But in the eleventh century, musicians in France and Flanders began to try experiments in what has since been termed polyphonic music. This was produced by causing two or more separate melodies to be sung or played at the same time. It is not necessary to argue that this form of music was developed in fulfilment of the methods arranged on page 3, in the column in which are *complement*, *balance*, *parallelism*, *complication*, and *interchange*. Orlando Lasso, the last and chief composer in this form, is said to have combined thus as many as five melodies.

Such music, however, gradually and almost necessarily, led to the harmonic music of the present. In this there is usually one melody with which all the other notes of the composition are made to chord—in other words, in this form of music, the methods on page 3 in the same column as *order* and *principality*, assert themselves to overcome the polyphonic tendencies toward *confusion* and keep them in artistic *subordination*. Could any historic facts confirm more satisfactorily the theories of this book with reference to the general methods in accordance with which musical art develops?

One main impetus to the development of harmony was the Protestant Reformation, and the demand that arose, in consequence of it, for a form of choral that could be sung by congregations in unison with an organ accompaniment. Another was the great abuse of polyphonic music that after a time crept into the Catholic services, in that the words of church music, because they could never be understood as sung in the different melodies combined, came often to be those of popular songs. A third reason was the desire aroused everywhere about that period to imitate any method supposed to be Hellenic. The first

great master of the new method was Palestrina, a pupil of the Huguenot Claude Goudimel, who was slain in the massacre of St. Bartholomew. Palestrina's harmonies, however, are very elementary, passing from one key to another with little or no attempt to carry out any of those principles with reference to sequence in sound, which must be followed in order to render a composition satisfactory to a modern ear. Here is the opening of his "Stabat Mater":

From such crude beginnings, however, all the elaborate system of modern harmony has been developed.

CHAPTER XIV.

MUSICAL SCALES AS DEVELOPED BY THE ART-METHOD OF GROUPING LIKE PARTIAL EFFECTS OF UNLIKE COMPLEX WHOLES.

As Harmony is Developed from Melody, to Understand Music, we must First Learn why Certain Notes are Fitted to Follow One Another—Scales Constructed from the Sense of Hearing, and All Scales Similar, Therefore the Same Law Underlies them—Sounds Differ in Quality—Musical Sounds Result from Regularly Periodic Vibrations—Differences in Loudness from the Different Amplitude of Vibrations, and in Pitch, from the Different Time of Vibrations—Differences in Quality from the Different Combinations of Vibrations—Vibrations Compounded, and Each of the Compounds Introduces into the Tone a Pitch or Partial Tone of its Own—Law of Sequence of the Upper Partial Tones of Musical Notes—Example in Music—Correspondence of the Earliest Greek Scale with the Chief Partial Tones of its Keynote—And of our Own Major Scale—A Possible Scale of Ten Notes—Our Minor Scale—These Scales All Constructed on the Principle of Grouping Like Partial Effects of Unlike Complex Wholes—The Method in which the Greeks, Ignorant of Partial Tones, were Guided to these Results by their Sense of Hearing—How they Constructed, by Measuring the Length of Strings, the Lyre of Orpheus—Similar Results Reached by the Moderns through Counting Vibrations, and the Resulting Ratios—The Ratios of the Chinese Scale of Six Notes as Developed by the Ancients—The Ratios of the Greek Scale of Seven Notes—Other Greek Scales—Deficiencies of the Greek Scale and the Development of the Modern Scales—Comparison between the Ratios of these and of the Pythagorean Scale—The Keys of the Piano and the Scales Played from the Different Keynotes—The Temperate Scale of the Present, and its Ratios as Compared with the Pythagorean, the Major, and the Minor.

PERHAPS the most significant facts for us to observe in the history of music, as briefly sketched in Chapter XIII., are, first, that harmony was developed from melody, not melody from harmony; and, second, that harmony was developed for the purpose of giving greater

prominence and intelligibility to the words used in connection with the music. The first of these facts is the one that has the most bearing upon our present consideration of the subject. We learn from it that when the Greeks found that consonances are made by strings, the lengths of which are in the ratios of one to two, two to three, and three to four; and when they formed that musical scale which is still to a great extent our own; they did so to meet the requirements of melody, of notes following one another, not of notes sounded simultaneously in chords. Accordingly, if we wish to discover the reason why they formed the scale as they did, we must discover why the notes of that scale are fitted to follow one another.

Of course the Greeks, in constructing their scale, were guided by the sense of hearing, just as modern musicians have been guided by it in constructing their systems of harmony. But why did the sense of hearing guide the Greeks in the particular way in which it did, and why, as will be shown to be the case, do the Chinese and other people, whose music has developed independently, as well as we ourselves to-day, use what is essentially a similar scale? What is the acoustic law that necessitates sequences of sounds of the kind found in this scale? It is only in very recent times, owing mainly to the researches of the great German physicist Helmholtz, that it has been possible to give any satisfactory answer to such a question. It seems now, however, as if it could be done. Let us, at least, make an attempt to do so.

All must have noticed that the sounds of instruments, of flutes, violins, and pianofortes, as well as those of the human voice, differ in what, for the present, in a vague way, we may term *quality*. One reason for this difference

undoubtedly is the fact that, in connection with the sound of the flute, we hear the escaping of the breath; with that of the violin, the scrapings of the bow; with that of the piano, the strokes of the hammers. Yet if we stand so far away from these instruments that the noises made by the breath, bow, and hammers are inaudible, we are still able to distinguish the tone not only of each different kind of instrument, but sometimes of each different instrument of the same kind. It is certainly so in the case of human voices. Now what is it that causes this difference in quality?

To answer this question we must understand first what a musical sound is, what is the difference between it and a noise. "A noise," says Helmholtz ("The Sensations of Tone," page 12) "is accompanied by a rapid alternation of different kinds of sensations of sound. Think, for example, of the rattling of a carriage over granite paving-stones, the splashing or seething of a waterfall, or of the waves of the sea, or the rustling of leaves in a wood. In all of these cases we have rapid irregular, but distinctly perceptible alternations of various kinds of sound, which crop up fitfully. When the wind howls, the alternation is slow, the sound slowly and gradually rises, and then falls again. . . . On the other hand, a musical tone strikes the ear as a perfectly undisturbed uniform sound which remains unaltered as long as it exists, and it presents no alterations of various kinds of constituents. To this, then, corresponds a simple regular kind of sensation, whereas in a noise many various sensations of musical tone are irregularly mixed up and, as it were, tumbled about in confusion. . . . The normal and usual means of excitement for the human ear is atmospheric vibration. The irregularly alternating sensations of the ear in the

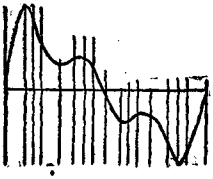
case of noises leads us to conclude that for these the vibrations of the air must also change irregularly. For musical tones, on the other hand, we anticipate a regular motion of the air, continuing uniformly and in its turn excited by an equally regular motion of the sonorous body whose impulses were conducted to the ear by the air. Those regular motions which produce musical sound have been exactly investigated by physicists. They are oscillations, vibrations, or swings, that is up-and-down or to-and-fro motions of sonorous bodies, and it is necessary that these oscillations should be regularly periodic. By a periodic motion we mean one which constantly returns to the same condition after exactly equal intervals of time. . . . The kind of motion of the moving body during one period is perfectly indifferent . . . but . . . the sensation of a musical tone is due to a rapid periodic motion of the sonorous body, the sensation of a noise to non-periodic motions."

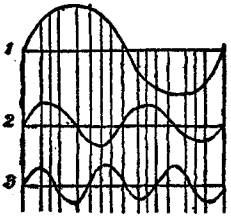
That musical sounds are caused, or, at least, accompanied, by vibrations has been known for centuries. These vibrations may be recognized by the eye in large strings, and by the touch in large reeds and pipes; and the experiments of physicists have placed the fact as applied to all sounds beyond a doubt. It has long been known, too, that differences in the degrees of force in sounds, *i. e.*, in loudness and softness, are due to the size, or amplitude of these vibrations; a cord struck with more force than another producing a louder sound because it vibrates, and causes the air to vibrate, farther from side to side. It has long been known also that differences in pitch are caused by differences in the time in which periodic vibrations are made. This has been unmistakably proved, among other ways, by the use of Cagniard de la

Tour's siren. In this, air is forced from a cylinder through holes occurring at regular intervals in a revolving disc, connected with which there is a clock-like arrangement registering the number of interruptions made in the current of air. When the disc is revolving rapidly a continuous musical sound is produced. In such cases, the number of interruptions represents, of course, the number of separate vibrations composing the sound at the pitch that is heard. To apply this principle to the effects of a cord; its whole length sounds a note, as ascertained by Pythagoras, just an octave below its half length, because, in the former case, it vibrates exactly twice as slowly as in the latter.

After physicists had proved that degrees of loudness in sound are determined by the amplitude of vibrations, and degrees of pitch by the time of vibrations, they felt that nothing was left to determine the quality of sounds except the form of vibrations. It was easy, too, for them to imagine that these should differ in form. For instance, when a bow is drawn across the strings of a violin, it may fall upon them, giving them an up-and-down motion; it may move over them, giving them a motion from side to side; it may turn them, giving them a twisting motion; it may bound over them, giving them a jarring motion; or it may do all these together; besides which, wherever it touches the strings it may check the movements caused by vibrations of their entire length, and cause smaller waves between the points where they are played upon by the bow and where they are attached to the violin. According to a similar mode of reasoning, it was natural to suppose that the waves of sound produced by a wind instrument, like a trumpet, or human throat, for instance, deviated as they are from a straight course by a number

of curves and angles, must necessarily be more or less compound as they emerge from the instruments; and, being so, must differ in form for different kinds of instruments. Considerations of this sort caused investigations to be made into the nature of vibrations; and by means of very ingenious expedients,—by magnifying, for example, the vibrations of a cord or pipe, and making them visible, through using an intense ray of light to throw an image of them upon a canvas in a darkened room,—the forms assumed by the vibrations caused by many of the ordinary musical instruments have been accurately ascertained. These forms have been resolved, according to well-known mathematical principles, into their constituent elements. For instance, if the form of vibration be as in the first of these examples, it may be resolved into the forms that are in the second.

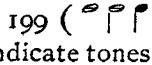




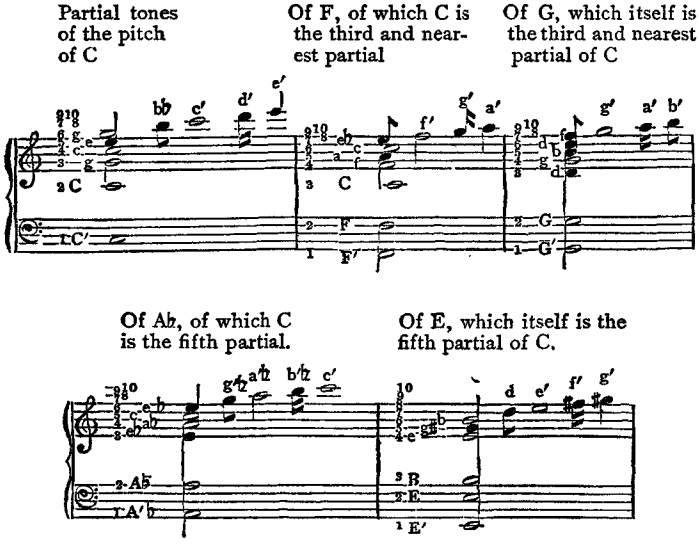
In short, investigations of this character have shown that musical sounds may result, and usually do result, not from simple, but from compound forms of vibrations; that is to say, in connection with the main waves there are other waves. All of these are not invariably present, but when present they are related to the main one—*i. e.*, in tones that make music as distinguished from noise—as 2 : 1, 3 : 1, 4 : 1, 5 : 1, 6 : 1, 7 : 1, 8 : 1, 9 : 1, and even in some cases as 10 : 1. In other words, these smaller

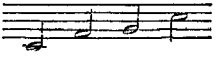
accompanying waves vibrate twice, thrice, and four times, and so on up to ten times, while the main wave is vibrating once. But this is not all. The sounds of these compound vibrations have been analyzed. By means of instruments like Helmholtz's resonators—small brass boxes or globes, so constructed as to collect to the ear tones of a single pitch—it has been found that each form of vibration represented in a note produces a separate pitch of its own. When, therefore, a tone is sounded on a violin, we hear in it not only the pitch caused by the vibrations of the whole length of the string, but also in connection with it a number of other partial tones, as all the constituents of any one note are called, each of which has its own pitch, produced by vibrations of one half, one third, one fourth, etc., of the length of the string.

The difference in the number, the combination, and the relative loudness of these partial tones in a musical sound is what determines its quality or timbre. In instruments like kettle-drums, cymbals, or bells, one side is almost invariably thicker than the other. For this reason, the main vibrations are not uniform, and, of course, the partial tones cannot be so. Such instruments, accordingly, are less musical than noisy, and are used on only exceptional occasions. But in ordinary musical sounds the partial tones, if present at all—they differ as produced by different instruments—are indicated in the notation below. Notice that the first partial tone is the same as the prime tone; also that the second, fourth, and eighth partials are the same as the prime tone with exception of being in higher octaves.

The notes on page 199 (), in the degree in which they are long, indicate tones which the reader needs most to notice; and the marks after the letters indicate

the relative distance of a tone from the octave of the tone which is the standard of pitch. C′, F′, or G′, for instance, are one octave below C, F, or G, and these are one octave below c, f, or g, and two octaves below c′, f′, or g′.


Partial tones of the pitch of C
Of F, of which C is the third and nearest partial
Of G, which itself is the third and nearest partial of C
Of A♭, of which C is the fifth partial.
Of E, which itself is the fifth partial of C.

Now, glancing at the above, suppose that we were to sound the note C, and then to sound after it notes whose partial tones connected them most closely with C. What should we do? We should sound F,—should we not?—of which C is the third partial, and G, which itself is the third partial of C? This, inasmuch as every C, F, or G of whatever octave has virtually the same sound, would give us the following:

But these are the very tones accredited to the "lyre of Orpheus," which represented the earliest of the Greek scales.

Now let us add to these notes those whose partial tones are the next nearly connected with C, F, or G. They are D the third partial of G, E the fifth partial of C, A the fifth of F, and B the fifth of G. This gives us

C—D—E—F—G—A—B—C,

which is our own major scale, the main one that we use to-day; and is similar to that used by the Greeks after theirs had been expanded to seven notes.

If now we include in the scale the lower partial tones of A♭, of which C is the fifth partial, and of E, which is the fifth partial of C, and add B♮, which is the seventh partial of C, as well as the ninth of A♮, we get the following result:

C–D–E♮ (the same in pitch as D♯)–E–F–G–A♭ (the same in pitch as G♯)–A–B♮–B–C.

There might be a scale of this length, as there is no reason in nature why its notes should be confined to seven. But as E♮, A♭, and B♮ are very near to E, A, and B, the latter are omitted wherever the former are used. By substituting these flattened notes for the natural ones, we get our minor scale in its two forms; first the ascending,

C D E♮ F G A B C,

and second, the descending,

C B♮ A♮ G F E♭ D C.

All these scales are derived, as will be perceived, according to the artistic principle of *putting together like partial tone-effects of unlike complex tone-wholes*, precisely as alliteration, assonance, or rhyme, as used in poetry, is a

result of putting together *like partial letter-effects of unlike complex syllable-wholes.* When we hear C sounded, we hear with it G as its third partial, and therefore, recognize in a following G, something that we have heard before. We are prepared therefore to pass from the C to G. In the same way we can pass from C to F, for in the F we continue to hear the C which is the third partial of F; and so on through the scale.

Of course these facts with reference to the partial tones were not known by the Greeks to whom we must trace the origin of our scale; but their ignorance renders it all the more significant that their ears should have been guided to results for which modern science alone is able to give a satisfactory reason. The facts with reference to the subject which they had ascertained are supposed to be as follows. They had found that the voice in recitation is in the habit of rising, to give the interrogative indecisive inflection, to the fifth note above the main pitch, and of falling, to give the affirmative decisive inflection, to the fifth note below this pitch. (See Helmholtz's "Sensations of Tone," Part III., Ch. XIII.). This led them with C to use G, the fifth above it, and F, the fifth below it.

In connection with these facts they had learned that a string of a given length, represented by the unit 1, would produce a sound, say C, forming a perfect consonance with sounds produced by the same kind of a string shortened either to one half of its length, as when sounding, above the first C, the C represented by $\frac{1}{2}$; or to two thirds of its length, as when sounding, above the first C, the G represented by $\frac{2}{3}$; or to three fourths of its length, as when sounding, above the first C, the F represented by $\frac{3}{4}$. In other words they had learned that sounds produced by strings related to one another as 1 to 2, 2 to 3, or 3 to 4,

would form consonances. Accordingly, for this reason, as well as for the purpose of having an instrument conformed to the requirements of recitation, they seem to have invented or adopted the "lyre of Orpheus," containing these strings

C	F	G	C
1	$\frac{3}{4}$	$\frac{2}{3}$	$\frac{1}{2}$

Modern musicians, however, do not determine the numerical ratios of sounds of different pitch by the relative lengths of strings, but of the vibrations caused by such strings. This is an improvement; because, if strings be not exactly alike, consonances will not be produced by shortening their lengths by $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, etc. Besides this, many sounds are not produced by strings at all. That which really determines pitch is the time of the vibrations, however caused. Accordingly to-day, if C be represented by 1, the octave above is represented by 2, because it is produced by two vibrations made in the same time as the lower one. While this lower one is made, the sound producing G makes $1\frac{1}{2}$ vibrations, and the sound producing F makes $1\frac{1}{3}$ vibrations.

In other words	C	F	G	and	C	are now represented
by	1	$\frac{3}{4}$	$\frac{2}{3}$	"	2	which, it will be noticed, express the same as
	1	$\frac{3}{4}$	$\frac{2}{3}$	"	$\frac{1}{2}$	obtained by a different method of computing the numerical ratio.

Instead of going on to develop their scale in accordance with the ideas suggested by these simple ratios, the older musicians seem to have been governed by what they considered to be the requirements of recitation. They enlarged their scale by continuing to introduce into it fifths others than those represented in G and F, the reasons for first using which were given on page 201. The fifth above

G, which, considering C to be 1, is represented by $(\frac{3}{2})$, is D, which, considering G to be $(\frac{3}{2})$, is represented by $\frac{3}{2}$ of $\frac{3}{2} = \frac{9}{4}$. This, if lowered an octave, gives the musical ratio $\frac{9}{8}$. The fifth below F $(\frac{4}{3})$ is $B_\flat$ $(\frac{4}{3})$; $\frac{4}{3}$ of $\frac{4}{3} = \frac{16}{9}$, giving us the musical ratio $\frac{16}{9}$. Adding these to our former scale we get

C	D	F	G	B♭	C
1	$\frac{9}{8}$	$\frac{4}{3}$	$\frac{3}{2}$	$\frac{16}{9}$	2

Arranged differently, this forms the Chinese scale, also the ancient Scotch scale, in which numbers of the popular songs of Scotland and Ireland were composed.

The Greeks did not use the note B♭. Terpander introduced A, the fifth of D, and E, the fifth of A. Finally, Pythagoras added B as the fifth of E, thus making a scale of seven notes, which number continues to this day. The ratios of the notes used by him when brought into the same octave are

C	D	E	F	G	A	B	C
1	$\frac{9}{8}$	$\frac{81}{64}$	$\frac{4}{3}$	$\frac{3}{2}$	$\frac{27}{16}$	$\frac{243}{128}$	2

Besides this, the Greeks had other scales formed by the simple process of beginning them with other notes, thus

E	F	G	A	B	C	D	E
A	B	C	D	E	F	G	A

The notes themselves, however, represented the same sounds as those of the scale beginning with C. Not many of these scales are known to have been used, and these very likely were not used extensively.

The Greek scale was defective, in that its members, with the exception of F and G were not derived from their connection with C, the fundamental note; and for

this reason, it could scarcely have met the requirements of modern harmony. In fact, it was felt to be unsatisfactory by the Greeks themselves. They tried to correct its deficiencies; but not until the sixteenth century were any important changes made in it. Then, in order to provide for the necessities of harmony, the existing scales began gradually to be transformed into our two modern ones, the major and the minor. In these, the object in view has been to make the ratios of the notes to the fundamental note and to one another as simple as possible. For this purpose the following figures were first chosen:

$1\frac{1}{8}$	$1\frac{1}{8}$	$1\frac{2}{5}$	$1\frac{1}{4}$	2
$\frac{8}{5}$	$\frac{4}{3}$	$\frac{5}{4}$	$\frac{5}{4}$	2
G	F	A	E	C

To these were added D, the fifth of G, shown on page 203, to be properly represented by $\frac{9}{8}$; and B, the third $(\frac{5}{4})$ of G $(\frac{3}{2})$., *i. e.* $\frac{5}{4}$ of $\frac{3}{2}$ properly represented by $1\frac{5}{8}$. According to these methods of calculating the ratios, methods which it is not necessary to describe further, the following results have been obtained:

	C	D	E	F	G	A	B	C
For the major scale	1	$\frac{9}{8}$	$\frac{5}{4}$	$\frac{4}{3}$	$\frac{3}{2}$	$\frac{5}{3}$	$1\frac{5}{8}$	2
For its intervals		$\frac{9}{8}$	$\frac{10}{9}$	$\frac{16}{15}$	$\frac{9}{8}$	$\frac{10}{9}$	$\frac{9}{8}$	$\frac{16}{15}$
For the Pythagorean scale	1	$\frac{9}{8}$	$\frac{81}{64}$	$\frac{4}{3}$	$\frac{3}{2}$	$\frac{27}{16}$	$\frac{243}{128}$	2
For its intervals		$\frac{9}{8}$	$\frac{9}{8}$	$\frac{256}{243}$	$\frac{9}{8}$	$\frac{9}{8}$	$\frac{9}{8}$	$\frac{256}{243}$
For the first form of the minor scale	1	$\frac{9}{8}$	$\frac{6}{5}$	$\frac{4}{3}$	$\frac{3}{2}$	$\frac{5}{3}$	$1\frac{5}{8}$	2
For its intervals		$\frac{9}{8}$	$\frac{16}{15}$	$\frac{10}{9}$	$\frac{9}{8}$	$\frac{10}{9}$	$\frac{8}{9}$	$\frac{16}{15}$
For the second form of the minor scale	1	$\frac{9}{8}$	$\frac{6}{5}$	$\frac{4}{3}$	$\frac{3}{2}$	$\frac{8}{5}$	$\frac{9}{8}$	2
For its intervals		$\frac{9}{8}$	$\frac{16}{15}$	$\frac{10}{9}$	$\frac{9}{8}$	$\frac{16}{15}$	$\frac{9}{8}$	$\frac{10}{9}$

The keys used on the piano and the organ are as follows:

1	2	3	4	5	6	7	8	9	10	11	12	13
white	black	white	black	white	white	black	white	black	white	black	white	white
C	C♯ / D♭	D	D♯ / E♭	E	F	F♯ / G♭	G	G♯ / A♭	A	A♯ / B♭	B	C

It is possible to begin the scale, *i. e.*, to sound the *do* of the *do re mi fa sol la si do* on any one of these keys, which in that case is termed the keynote, and, by using half intervals at the right places—in other words between the 3d and 4th and between the 7th and 8th notes—to produce a scale containing approximately the same order of sounds. Instead of a scale we may start a melody on any one of these different keys; and the ear will recognize that, though its general pitch is higher or lower, nevertheless its notes continue to sustain, each to each, relations that keep the melody very nearly the same. But they do not keep it exactly the same. Observe the numbers for intervals in the key of C:

	do	*re*	*mi*	*fa*	*sol*	*la*	*si*	*do*
and in the key of C:	C $\frac{9}{8}$	D $\frac{10}{9}$	E $\frac{16}{15}$	F $\frac{9}{8}$	G $\frac{10}{9}$	A $\frac{9}{8}$	B $\frac{16}{15}$	C
and in the key of G:	G $\frac{10}{9}$	A $\frac{9}{8}$	B $\frac{16}{15}$	C $\frac{9}{8}$	D $\frac{10}{9}$	E $\frac{9}{8}$	F $\frac{16}{15}$	G

Besides this it must be evident that if all sharps are at equal distances above their naturals and all flats at equal distances below them, there must be something out of the way either about the note $\left|\frac{C♯}{D♭}\right|$ representing half of the interval $\frac{9}{8}$ between C and D; or else about the note $\left|\frac{D♯}{E♭}\right|$ representing half of the interval $\frac{10}{9}$ between D and E. Such facts prove that, in order to represent each scale with absolute accuracy, there should be separate notes or keys for all possible sharps and flats, as well as for the notes that are termed natural. As such arrangements would render a musical instrument exceedingly complicated, and the execution of music on it correspondingly difficult, what is called the temperate scale came into use during the last century, mainly through the efforts of Sebastian Bach. This scale represents ratios approximat-

ing those of the mathematical, but not the same; and its value consists in the large use that it enables us to make of pianos and organs, in which the same key can always be struck for the sharp of one note and for the flat of the note above it. The difference between the temperate and the mathematical scales may be illustrated thus: If we suppose the fundamental note C to make 240 vibrations in a second of time, the different notes of the following scales will make these vibrations:

	C	D	E	F	G	A	B	C
The mathematical major scale	240	270	300	320	360	400	450	480
The mathematical minor	240	270	288	320	360	384	432	480
The temperate	240	269$\frac{3}{5}$	302$\frac{2}{5}$	320$\frac{2}{5}$	359$\frac{3}{5}$	403$\frac{3}{5}$	453	480
The Pythagorean	240	270	303$\frac{3}{4}$	320	360	405	455$\frac{5}{8}$	480

Accordingly, we see that the scale used to-day is not by any means as different as might be expected from that of Pythagoras.

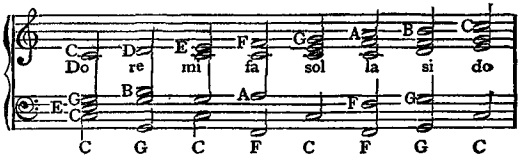
CHAPTER XV.

MUSICAL HARMONY AS DEVELOPED BY THE ART-METHOD OF GROUPING LIKE PARTIAL EFFECTS OF UNLIKE COMPLEX WHOLES.

Historical Developments from Counteraction, etc., as Involved in Polyphonic Music—Connection between the Concords and the Lowest or Chief Partial Tones of a Compound Note—Harmony Emphasizes the Fact that Like Partial Effects are Put with Like—Visible Proof of this—All the Notes of a Scale Harmonized by Using Chords Based on the Tonic, Dominant, and Subdominant—Different Possible Arrangements of the Same Chord—The Cadence and the Dissonance of the Seventh—The Principal Key—Application of Subordination, Balance, Central-Point, Parallelism, Symmetry, Alternation, Massing, Complication, Continuity, etc.—And Other of the Methods of Art-Composition—Interchange as an Element of Modulation—And Gradation, Abruptness, Transition, and Progress—Interchange and Gradation in Sounding the Same Note in Successive Chords—In Passing from One Key to Another, by Making the Tonic or Subdominant of One Key the Dominant of Another—By Passing from Major to Minor, or *Vice Versa*—Further Exemplified and Explained—Relations of Different Chords to One Another—Abruptness in Transitions—The Chords Considered Separately—The Major Triad—The Chord of the Seventh—The Minor Triad—The Ratios of the Notes of these Chords when in the Same Octaves—Summary of the Ratios of Notes Causing Musical Concords.

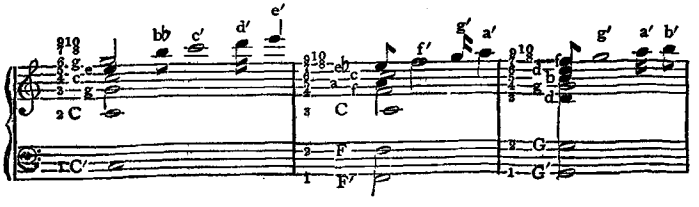
WE come now to harmony proper. This was developed, as we have noticed, from melody; but not until the world had been accustomed to melody for many centuries. Historically, the laws of harmony were discovered as a result of experiments made in composing polyphonic music; in other words, as a result of that

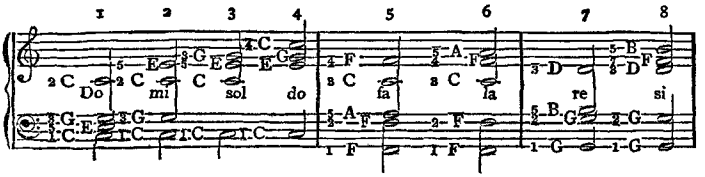
making of *order* out of *confusion* which, on page 3, is shown to be *counteraction.* In trying to put together two, three, or four melodies men found that certain notes when combined sounded agreeably and others disagreeably. Of course they soon learned to use the former combinations, and to avoid the latter. For many years, as exemplified in the opening strain of Palestrina's "Stabat Mater" (see page 191) there were no acknowledged laws of harmony. Now, however, it is different. As a rule, for instance, the notes of the ordinary major scale are harmonized thus:



Let us take these concords now and compare them with the scheme of the upper partial tones of C, F, and G, from which, as we found on pages 199 and 200, the major scale of C is derived. We at once notice that C, F, and G are the three bass notes used in harmonizing this scale; also that the nearest and most universally present partial tones of C, F, and G are those used in the successive chords. Let us try to arrange the scheme of the partial tones and the chords harmonizing the different notes of the scale so as to show this fact in the clearest way.

PARTIAL TONES.



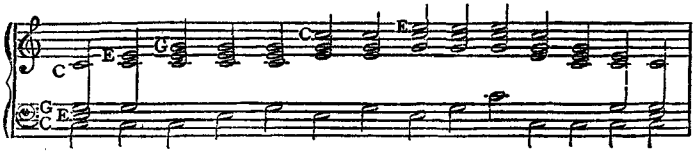
HARMONIC CHORDS.

In the first of the above chords, G is an octave below where it belongs as the third partial, and E is two octaves below where it belongs as the fifth; in the second, third, and fourth chords E is one octave below where it belongs as the fifth partial. In the seventh chord B is one octave below where it belongs as the fifth partial; and in the eighth chord F is one octave below where it belongs as the seventh partial.

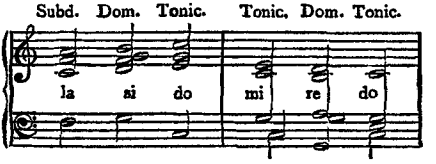
A comparison of the notes on these two staves will show that harmony does little more than to repeat in such a way as to reinforce, the partial tones already in the sounds that it accompanies. In other words, it emphasizes the fact that in the successive notes of the scale like or allied partial effects are put together. "When, for example," says Helmholtz, "I ascend from C to its sixth A, I recognize their mutual relationship in an unaccompanied melody, by the fact that e′ the fifth partial of C, which is already very weak, is identical with the third of A. But if I accompany the A with the chord F–a–c, I hear the former *c* of the chord continue to sound powerfully; and know by immediate sensation that A and C are consonant, and both of them constituents of the compound tone F" ("Sensations of Tone," III., 15).

A visible proof of the fact that in the scale like partial effects of unlike complex wholes are put together, may be afforded by a glance at the chords on page 208 harmoniz-

ing in succession *do re mi fa sol la si* and *do*. It will be noticed that the chords accompanying *do re mi* and *si* all contain , that those accompanying *do mi fa sol* and *la* contain , and that those accompanying *fa la* and *si* contain

As shown by these chords, moreover, all the notes of the scale, and therefore any melody composed entirely in notes of this scale, can be harmonized throughout by using the chords based upon the notes of the octave below its *do* (C), of the octave below its *sol* (G), and of the octave below its *fa* (F). The *do*, which in this case is C, is termed the keynote or the tonic. The *sol*, which is G, is termed the dominant. This is so because it is the bass of the chord harmonizing *re* and *si*, which notes, when the tones of the scale are sounded in order downward or upward, precede *do* and prepare the ear to hear it. The *fa*, which is F, is termed the subdominant, because it stands in the scale just below the dominant *sol*.

Except at the end of a musical cadence any note in a chord may be used in its bass or treble as its lowest or highest note. All these, for example are different arrangements of the same chord.

In order to emphasize a cadence, however, and, of course, at the end of a composition, the ear seems to desire to hear notes that chord in succession with

the subdominant, dominant, and tonic. Of these, the subdominant can be omitted, but not, without unsatisfactory effects, the other two. The chord of the dominant seems to be necessary because it harmonizes with *re* and *si*, and, when the scale is sounded downward or upward according to the order of its notes, the ear expects to hear one of these two before the *do*. With the chord of the dominant in such cases it has become customary to bring in also the seventh partial tone. This is slightly dissonant, suggesting an effect of unrest which in musical language indicates that the chord is used for the purpose of preparing the ear for another. As it has become a rule in music—not, however, without exceptions—to sound the chord of the tonic after this chord of the seventh, the ear has no difficulty in recognizing the tonic when it is reached. With reference to this whole subject, see "Music as a Representative Art," Chapter V. Here are the subdominant, dominant, and tonic of the key of C:

In composing modern music, a certain key is chosen as the principal one, to the keynote or tonic of which all the sounds used, however intricately developed, constantly return. This fact is an important element in producing an effect of *unity* in the *organic form*, especially in an extended composition.

In the constant tendency to return to the keynote and its harmony, we find a literal exemplification of the method of *principality*, involving, as is evident without explanation, *subordination*, as well also as *balance* between

this tendency and its opposite. These effects are brought about, moreover, by what are termed, in the chart on page 3, *central-point* and *setting*, the first constantly drawing the lines of the movement back to their starting-place, the second assigning limits to the impulse to wander from it. If then the methods of movement, in returning to the key and in departing from it, be at all representative of moods, as they should be, we may find in the principal and subordinate themes fulfilments of the methods of *congruity*, *incongruity*, and *comprehensiveness*. The similarity of the movements, too, both rhythmic and harmonic, as the chords pass from phrase to phrase and key to key, necessarily involves more or less of *symmetry*, and of that development of *complement* and *balance*, which we call *parallelism*. Of *repetition* and *alternation* in thesis and anti-thesis, of *massing*, as exemplified in the grouping of soft or forcible passages, especially in the reiterated strains of the cadence; of *interspersion* and *complication* in the fugue, and other movements resembling it, and of *continuity* in the logical unfolding of the theme or themes, no mention need be made here beyond what has been already pointed out in "The Genesis of Art-Form."

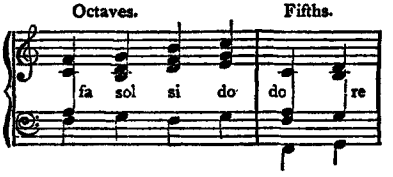
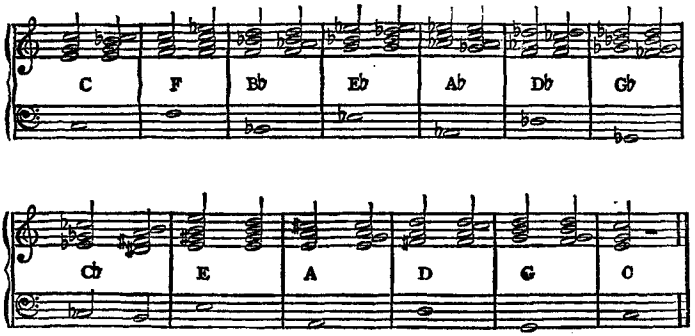
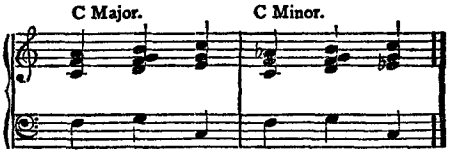
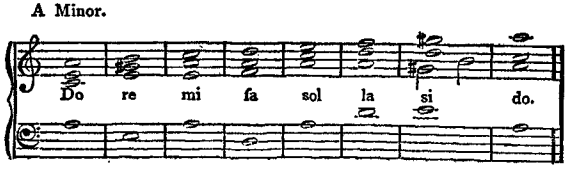
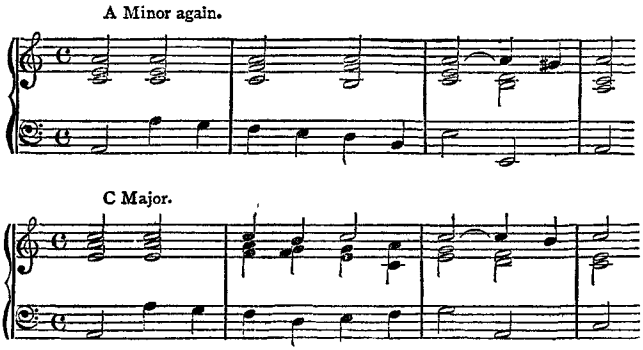
Dissonance, *interchange*, *gradation*, *abruptness*, *transition*, and *progress*, however, as developments of *consonance*, which of all the methods is the one most closely connected with the harmony of sounds, need to be considered at more length.

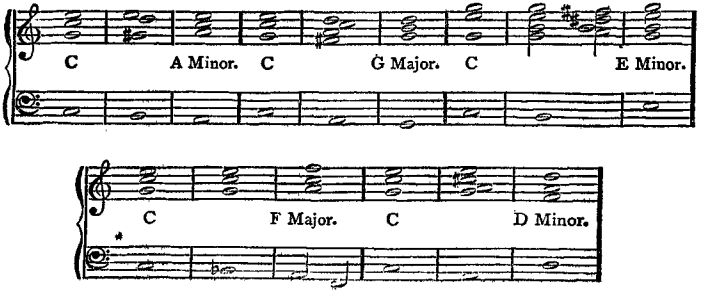
To begin with, it is noteworthy that the very first principle of *modulation*, by which is meant the method of passing from chord to chord, necessitates an application of what has been termed *interchange*. This, as pointed out in Chapter XV. of "The Genesis of Art-Form," and as will be illustrated presently, is a musical method in

accordance with which, in passing from one chord to another, unity of effect is maintained by sounding in both chords one note that is the same. To such an extent is the application of this method supposed to be necessary that, often, when, through the second chord, the music enters a different key, a note legitimate only to this second chord and key is arbitrarily introduced into the first chord. (See "Genesis of Art-Form," Chapter XV.) This method and a special use of it are thus mentioned by Gardiner in Chapter XXXIX. of his "Music of Nature." "When we modulate upon an organ or pianoforte, in passing from one chord to another, it may be laid down as a general rule that one of the fingers should remain upon that key which is to form a part of the succeeding chord. This gives a smoothness to the transitions readily perceived by the ear. For bold and sudden effects, these connecting links of harmony are dispensed with."

It is hardly necessary to point out that the second sentence of this passage enjoins the use not only of *interchange*, but also of *gradation*, and that the last sentence describes the exceptional use of the method of *abruptness*. These methods, taken together too, evidently determine the character of each *transition*, and all of them combined that of the *progress*. (See page 3.)

It is, of course, the desire to emphasize the fact of the likeness between consecutive chords that underlies the use of *interchange* and *gradation*. The former of these, as indicated on page 3, is a development of *balance*; and it accounts, in part at least, for that law of musicians in accordance with which, in passing from chord to chord, consecutive octaves and consecutive fifths should be avoided. Where they are not avoided, it is frequently the case that there is no interchange, because there is no

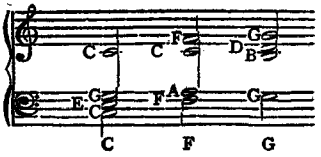
note in one chord that is sounded in a following one. Here is an arrangement of harmony bringing in consecutive octaves for the chords harmonizing with *fa* and *sol*, and with *si* and *do*; and consecutive fifths for those harmonizing with *do* and *re*. Upon comparing this arrangement with the chords made to harmonize with the same notes on page 208, the superior unity of effect through the *interchange* in the former arrangement will, at once, be apparent.

The importance of *interchange* and *gradation* as elements of harmony is still more evident when considered in connection with the methods of passing from one key to another. Mention has been made already of the fact that in entering a new key the ear, to be assured that the *transition* has been made, needs to hear in succession the chords of the dominant and of the tonic. It follows from this that, as the tonic of any key in which the music happens to be moving may always be the dominant of some other key, it is possible to pass at once from the one into the other. The following is a common way of making the circuit of all the major keys, and is accomplished by using each tonic as a dominant. Notice how the methods of *interchange* and *gradation* are fulfilled throughout. Every chord, including of course the bass note, contains at least one note that is sounded in the chord following.

Besides this it is possible to pass from one key to another by means of the relations that exist between the major and minor keys. The scale of C *major*, for instance, is related to C *minor*, because both have the same subdominant, dominant, and tonic. But in making these transitions again we have the same evidence of interchange and gradation.

The former of these keys is related still more closely to A minor than to C minor, because, while in C minor E, A, and B sometimes are flat, in A minor all are natural, —in fact all the notes, except at times G, are the same as those used in C major, *e. g.*

In the same way as the key of A minor is related to C major, D minor is related to F major, G minor to $B_\flat$ major, C minor to $E_\flat$ major, F minor to $A_\flat$ major, B minor to D major, E minor to G major, $C_\sharp$ minor to E major, $F_\sharp$ minor to A major, $B_\flat$ minor to $D_\flat$ major, and $E_\flat$ minor to $G_\flat$ major. We have noticed how closely related the key of C is to those of G, its dominant, and of F, its subdominant. Observe now that each of these three,—the key of C, of G, and of F,—has a related minor key, C that of A minor, G that of E minor, and F that of D minor. These facts make it possible to pass directly from the key of C into all of these six other keys. But notice how in strict fulfilment of the requirements of *interchange* and *gradation*, each chord, when these transitions are made according to

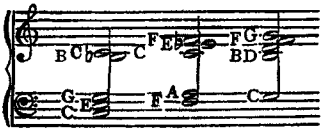


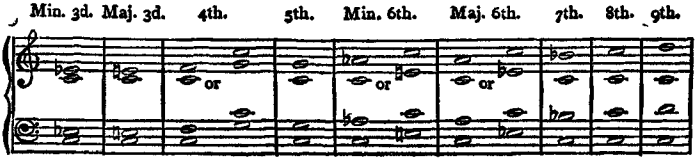
rule, contains, at least, one note that is repeated in the chord immediately following it.

It is not necessary to explain here in what ways it is possible to pass from C major into other keys more remotely related to it. Enough has been said to illustrate that for which these examples have been used, namely, to show the influence of *interchange* and *gradation* upon the accepted methods of making *transitions* from one key to another. An experienced musician, of course, will find various and often original ways in which to apply these methods; and occasionally too will make abrupt transitions with no apparent interchange. But in these cases his methods form exceptions to the rule; and they are allowable only for the reasons that ellipses are allowable in rhetoric—because the effects, which are not expressed, are *understood*, the ear being so accustomed to the recognized order of the succession of the chords that the dropping of one link in the chain does not interfere with a perception of the unity of the series. If *abruptness* were carried so far that the ear could not perceive the possibility, notwithstanding it, of connecting the sounds in some melodic or harmonic way so as to fulfil the principle of *putting together like partial effects of unlike complex wholes*, no æsthetic impression of artistic *unity* could be conveyed by the method of the *transition*.

So far an endeavor has been made to explain the relations of consecutive chords. Let us now examine the chords separately, and notice the different degrees of pitch of the tones of which they are composed. We have found on page 209 that these tones are the same as the lower and, by consequence, more prominent partial tones compounded with the prime tone of their fundamental bass note. By bringing the lower partial notes into a single octave, we get the ordinary major chord or triad, as it is called, *e.g.*:



To this triad a fourth note is sometimes added. Inasmuch as the second, fourth, and eighth partials respectively are exactly one octave above one another, and also the third and sixth, it will be recognized that, in case another partial be introduced into the same octave with the second, third, and fifth, which constitute the major triad, it must be the seventh partial. This gives the chord of the seventh as follows:

The minor triad differs from the major in the flattening of the note corresponding to the fifth partial, or, as the notes are usually arranged in the chord, of that note which is the first above the bass. It is developed from the requirements of the minor scale (see page 200), which itself is developed from relations to the fundamental note of the bass slightly more remote than are the relations of the notes of the major scale. Notice on page 199 the e♭ as the seventh partial of F, of which C is the third partial, and also the E♭ as the third partial of A♭, of which C is the third partial. Here is the minor triad:

Of course, it is understood that whenever, as is usual in forming chords, in order to bring all their notes into a single octave, a partial note is sounded an octave below where, as a partial, it belongs, the number of vibrations causing it is lessened by one half. This accounts for the fact that, while the ratios of the prime tone to the different partial tones are as 1 : 2, 1 : 3, 1 : 4, 1 : 5, 1 : 6, 1 : 7, 1 : 8, etc., the ratios of the fundamental bass note to the actual notes used in the common chords are as 1 : 2, 2 : 3, 3 : 4, 4 : 5, 5 : 6, etc. Bearing this in mind, let us notice the ratios representing the relations of the fundamental bass note of the chord to each of the notes that in different combinations enter into it. For an explanation of the ways in which these ratios are calculated see pages 201 to 204. Beginning, for convenience, with the note that is nearest the bass, here are these relations expressed in musical notation both in the bass and the treble clefs. The last measure contains also the relations of the chord of the ninth, a partial discord very seldom used, but still not wholly discarded.

A comparison of these notes with what is said of the partial tones on page 199, as also with what, on pages 201 to 204, is said of the methods of calculating the ratios of the notes used in the musical scale, will enable us to recognize that

the notes represented by	causing the chord called the	calculated according to the relative length of strings causing vibrations gives the ratio of	and according to the relative time of vibrations gives the ratio of
C and E♭	Minor third	6 : 5	5 : 6
C and E	Major third	5 : 4	4 : 5
C and F	Fourth	3 : 4	4 : 3
C and G	Fifth	2 : 3	3 : 2
C and A♭	Minor sixth	5 : 8	8 : 5
C and G	Major sixth	3 : 5	5 : 3
C and B♭	Seventh	4 : 7	7 : 4
C and C	Eight or octave	1 : 2	2 : 1
C and D	Ninth	4 : 9	9 : 4

It is evident, therefore, that the ratios which determine the harmonies of music are either these, 1 : 2, 2 : 3, 3 : 4, 4 : 5 (8 : 5), 5 : 6, 4 : 7, 4 : 9; or else, in case a note used be in a lower octave, one of these ratios with one of its factors divided by 2; or, in case a note used be in a higher octave, one of these ratios with one of its factors multiplied by 2. This would give such additional ratios as 1 : 3, 2 : 7, 2 : 9, 5 : 12, 8 : 7, 8 : 9, 10 : 12, 16 : 7, and 16 : 9.

CHAPTER XVI.

PSYCHICAL AND PHYSICAL REASONS FOR THE EFFECTS OF MUSICAL FORM.

Relations of the Ratios Underlying Effects in Music to those in the Other Arts—Why is it Necessary that Notes should Chord?—Psychological Reason—Correspondence of it to the Reason Given for Effects of Rhythm—Physiological Confirmation of this Reason—Beats Resulting from Discordant Notes—New Resulting Notes Formed by these Beats—In the Major Triad, the Resulting Note is itself the Tonic—Beats Disagreeable, because Interruptions of the Regularity of Periodic Vibrations—Cause Noise, not Music—Blending of Psychological and Physiological Reasons for Effects of Musical Form: Mind and Ear must Recognize that Like is Put with Like.

AS those who are at all versed in æsthetics will understand, there are important bearings upon the other arts of the use of the simple ratios, mentioned at the end of Chapter XV. At present, however, it concerns us only to find out, if we can, why it is that chords representing them are the only ones that in music produce satisfactory effects.

We have already found one reason for this in the fact that these ratios represent the only tones that are naturally compounded with, and therefore that can chord with, the partial tones of the fundamental bass note. But what of that? Why is it necessary that tones should chord? Why does the mind or the ear demand concordance in the sounds used in music?

In answer to this we might begin by inferring a psycho-

logical reason. Sounds result from vibrations that cause oscillations in the air, and through it in the liquid within the inner labyrinth of the ear, and finally in the fibrous terminations of the auditory nerve that float in this liquid. There is a sense in which it may be said that the mind is conscious of these vibrations, for when it hears a certain number of them, per second, it invariably hears a sound of a certain pitch. Now if the vibrations causing two notes start together every second, third, fourth, fifth, or sixth time that they are made, as they do in the notes composing the musical concords, it is easy for the mind —on the supposition, of course, that in some subtle way it takes cognizance of vibrations—to perceive a unity in the result, because it can analyze the vibrations and perceive that they all form exact subdivisions of certain definite wholes. But if the vibrations causing the tones start together at only long and irregular intervals, then any analysis or classification of the different constituent effects is impossible. Of course such a result cannot be else than confusing and unsatisfactory.

This explanation, which is the one given by Euler, has much to recommend it. We know how it is in the case of musical rhythm. Certain measures, to all of which an equal time is given, are filled with notes and rests that represent exact subdivisions of this time—the whole of it or a half, a quarter, an eighth, or more, as the case may be. When the musician composes or sings in rhythm, he beats time, mentally if not physically, and puts into each measure just the number of notes that will fill it. Why are we not justified in surmising that the principle which the mind applies consciously when it counts the beats that determine the relations of a note to rhythm, it applies unconsciously when it counts the beats or vibrations that

determine the relations of tone to pitch? The fundamental bass note of the chord represents a certain number of vibrations per second. These constitute, so to speak, the chord-measure, and only those notes can be used in the chord which represent the partial tones produced by exact subdivisions of this measure. In fact, there is ground enough for holding the theory that music is no more than an artistic adaptation of the laws of rhythm, of a part of which, as related to duration, the mind is conscious; but of another part of which, as related to pitch—*i. e.*, to the rhythm resulting from tone-vibrations,—it is unconscious.

But it has not yet been shown here that the mind actually does count or compare vibrations. It may do this, but is there any proof of it? We may best begin an answer to this question by going back of the action of the mind to that of the ear that occasions it, and ask, is there any proof of a physical requirement in the ear underlying an operation analogous to comparison as made in the realm of consciousness?

There is proof of such a requirement. If we sound at the same time two very low notes of an organ separated from each other on the scale by only half a tone,—C and C♯ for instance,—we shall hear, not a consecutive tone, but a succession of throbs or beats. Knowing that all sounds are caused by vibrations, and that a difference in pitch is caused by a difference in the time of vibrations, it is easy to understand how these beats are produced. Suppose that one of the notes is a result of fifty vibrations in a second, and the other of fifty-one. At the end of the twenty-fifth vibration in the first of the tones, there will have been, in the second, twenty-five and one half vibrations. But as each vibration necessitates a movement in one direction half the time, and in a con-

trary direction the other half the time, the vibrations in the first tone will move from the twenty-fifth to the fiftieth in an opposite direction from those in the second tone. For this reason the vibrations causing the two tones will tend to suppress and to still one another, just as is the case where two waves of nearly equal size but contrary motions come together at the mouth of a river. However, at the fiftieth vibration in the first tone, and at the fifty-first in the second, the vibrations in the two will again move in the same direction, and tend to reinforce one another. A difference between two notes, therefore, corresponding to one vibration in a second, will cause one suppressed period and one reinforced period of sound,—or one beat in a second; a difference of two vibrations, two beats in a second, and so on. In a difference of this kind between low notes caused by a limited number of vibrations in a second, these beats are perceptible, as has been said, and are easily counted; but this is not the case when produced by high notes. Then one of two results follows. The beats either become so numerous as to form vibrations causing an entirely new tone, or else they continue to exist as beats which the ear cannot distinguish, but feels to be disagreeable.

They form a new tone whenever thirty-three or more of them occur in a second—this being the number needed to produce the lowest of musical notes. It has been found that whenever the vibrations of two combined tones differ, even if they be consonant, a new resultant note is produced, and the number of vibrations *per second* causing this resultant note, is always equal to the difference between the numbers of vibrations per second in the tones that are combined. For instance, if the ratio of combined notes be that of four to five, or as that between

two hundred and two hundred and fifty, the resultant note will be represented by 1, *i. e.*, it will be caused by fifty vibrations. The ratios of the notes used in the ordinary chords (see page 220) give these as resultant notes.

Do and major third, 4 : 5, difference 1, which represents the second octave below 4, *i. e.*, *do.*

Do and the fifth, 2 : 3, difference 1, which represents the first octave below 2, *i. e.*, *do.*

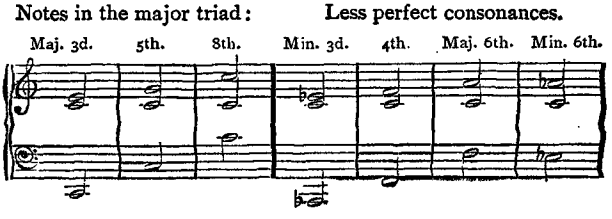
Do and the second or upper do, 1 : 2, difference 1, which represents the note of the lower octave, *i. e.*, *do.*

Do and minor third, 5 : 6, difference 1, which represents the second octave below the fifth of 6, *i. e.*, *la.*

Do and the fourth, 3 : 4, difference 1, which represents the second octave below 4, *i. e.*, *fa.*

Do and major sixth, 3 : 5, difference 2, which represents the fifth below the fundamental 3, *i. e.*, *fa.*

Do and minor sixth, 5 : 8, difference 3, which represents the major sixth below the fundamental 5, *i. e.*, minor *me.*

In the following, the chords themselves are placed in the treble clef, and the resultant notes in the bass clef.

The first three measures above will show us a new reason why the notes of the major triad form the most simple chord, and the one most closely related to the tonic. This is because the resultant note of all of the tones composing

the triad is itself the tonic, or *do*, of the scale in which they are used. It will be evident, too, from what has been said, that often the resultant notes will not harmonize with every note used in the combined sound producing them. When they do not, they themselves, in connection with the tone with which they do not harmonize, give rise to beats. Beats, therefore, in one form or another, are inevitable characteristics of discords.

Why does the ear find these beats disagreeable? For this reason. They are interruptions in the continuity or regularity of the vibrations. On page 194 attention was directed to the fact that a musical sound, and therefore all the pleasure derivable from it as such, is due to the rapid periodic, or—what means the same—the regularly recurring motion of the sonorous body; and a noise to its non-periodic, or irregularly recurring motion.

When beats occur that interfere with harmony, therefore, there is noise instead of music. But noise in music not only violates the artistic principle which requires that like amid varied effects be put with like, but it communicates to the auditory nerves a series of shocks, conveying an intermittent, irregular, disordered excitation; whereas it is natural to suppose that, in all agreeable excitations of the nerves, the thrill and glow that are pleasurable are characterized by the elasticity and freedom accompanying non-interference. We may infer this from the fact that in nature all movements are regular and rhythmical. The leaves and limbs of a twig, for instance, vibrate, when struck by a blow, as regularly as does a pendulum. The same must be true of the oscillations in Corti's fibres, as they are called, in the cochlea or auditorium of the ear. At any rate, we know that only regularly recurring vibrations can produce the sensations in the

auditory nerves which render music enjoyable. Helmholtz says, "Sensations of Tone," Part II., Chapter XII.:

"Consonance is a continuous; dissonance, an intermittent sensation of tone. Two consonant tones flow on quietly side by side in an undisturbed stream; dissonant tones cut one another up into separate pulses of tone. This description of the distinction at which we have arrived agrees precisely with Euclid's old definition, Consonance is the blending of a higher with a lower tone. Dissonance is incapacity to mix, when two tones cannot blend, but appear rough to the ear."

In conclusion, we may blend the physiological and psychological reasons for the effects of music, thus: The ear has become habituated through long experience to search for unity of effect in sounds. When it hears musical chords, it recognizes, after a few vibrations, that all the sounds are exact subdivisions of some one note,—in other words, that what is heard results from a succession of like amid varied effects. At other times, when the mind cannot recognize that this is the case, it is natural to suppose that there is an endeavor to recognize the fact, and, owing to this endeavor, that there is a positive effort on the part of the organs of sensation in the ear to adjust themselves to the new conditions and to discover elements of unity and likeness that do not exist. That the ear is sometimes successful in doing this, is proved by its acceptance of the slight variations from true harmony that are found in the temperate scale. In decided discords, however, nothing can make the sounds seem to compare, and the nerves and muscles are wearied by the effort of trying to do it, just as they would be, were they listening intently for sounds or footsteps which they failed to hear. Of course, the nerves of hearing, strained, and on the alert, but without success, give the ear pain, not pleasure. Pleasure in connection with sound, æsthetic satisfaction in con-

nection with tone, is experienced by mind or ear in the degree only in which the result is perceived to be a *unity obtained from the apparent variety of unlike complex wholes by putting together those that have like partial effects.*

MUSIC AS A REPRESENTATIVE ART.

INTRODUCTION.

A SYSTEMATIC arrangement of this series of essays would place "Music as a Representative Art" in the same volume as "Poetry as a Representative Art." But it has been thought best to depart from this arrangement on account, partly, of the length of the latter of these essays, partly, of the brevity of the two that are in this volume, and partly of the desirability of bringing together under one cover material naturally fitted to appeal to those especially interested in music.

For another reason, too, this course may be found advantageous. It was shown in the first of this series of essays, "Art in Theory," that the higher arts, sometimes called for this reason, the humanities, are all developed from forms in which a man expresses thought or mental feeling, which forms, because thought and feeling are inaudible and invisible, are always adaptations by him, for representative purposes, of sights or sounds furnished by the physical phenomena of external nature, including the physical utterances or movements which are natural to the human beings about him as possessors of bodies as well as of minds.

It was shown, moreover, that the representation of mind, or the expression of thought and feeling, and the representation of nature, or the use of forms unchanged in appearance from the way in which they are presented in the world about one, necessarily go together. "An artificially shaped machine or implement," it was pointed

out, "at once suggests the question, 'what can it do?' But a drawing or carving never suggests this question, but rather 'what did the man who drew the object think about it or of it, that he should have reproduced it?'"

A further consideration suggested by the fact that the art-form is an expression of thought and mental feeling, and also a reproduction of an appearance of nature, was that the efforts of the artist must constantly be turned in two apparently different directions, one tending to develop the form on account of its effects upon the mind; the other, on account of its effects upon the ear or eye. It was said, too, that the first tendency leads him to develop the possibilities of significance in the form; the second tendency, to develop the possibilities of style in it, and, therefore, of such characteristics as rhythm and harmony, which, as exemplified in poetry and music, have been considered in the preceding essay.

The essay which follows has to do with form as expressive of significance; and it will serve to counteract any erroneous impressions, if such have been produced, with reference to the exclusiveness of the claims of form considered merely as form. It will serve to do this all the more effectively inasmuch as music is one of the two arts —architecture being the other—concerning the necessity of significance in which there is the most need of argument. For years, certain writers have supposed it to be an indication of critical discrimination to divide the arts into those which they term the representative and the presentative. Reasons why this distinction is detrimental to the true theory of art, and to true methods of production in it, are suggested in the Preface, as well as in Chapters IV. to VIII. of "Art in Theory," and, as applied to poetry, are clearly indicated in chapter XIX. of

"Poetry as a Representative Art." But, notwithstanding proof to the contrary, the writers mentioned have strenuously insisted, as in the quotation on page 235, that the theory that all art is representative is certain to "break down" when applied in detail to music. How far this prophecy has been justified the reader of this essay will have an opportunity of judging.

As will be unfolded in the pages that follow, significance in music is derived partly from its use of instinctive methods of intonation (aside from articulation as in words), through which men convey to one another intelligence of particular phases of feeling; and partly from its use of methods of sound coming from sources other than human. The use of the first of these methods causes music to represent the mind; the use of the second, causes it to represent nature; but it is well to notice that the second method merely carries further, as will be exemplified, a process which the mind, according to *the principle of correspondence*, is constantly employing, and that only in cases in which sounds of nature are used, such as the mind has not previously employed for purposes of expression, can music be said to be, in a strict sense imitative.

On page 97 of the essay on "Rhythm and Harmony in Poetry and Music" it was said—and the statement needs to be repeated here—that significance in music is determined by the character of that which is there described as the *motive*. This motive, itself representative, continues to be representative when developed; but, nevertheless, it is developed almost entirely in accordance with the requirements of form irrespective of significance. In this regard there is a close correspondence between music and architecture. A symphony is constructed from a single

significant series of tones; and precisely in the same way a building is constructed from a single significant series of outlines, as in a rounded or pointed arch. In both arts, however, there is an occasional return to nature for the purpose of incorporating, if not imitating, in the product some new expression of significance. But as both arts are developed, as will be shown in the first chapter following, from a sustained and subjective method of giving expression to a first suggestion, a return to nature is much less frequent in them than in the other arts. Poetry, being developed from the unsustained and responsive methods of expression underlying language, manifests a constant tendency to *talk back* and, therefore, to mention and describe what has interrupted the flow of thought and presented new thought. Painting and sculpture, being developed from the same methods of expression, when underlying vision, manifest a constant tendency to *look back* and, therefore, to imitate and depict what has interrupted the contemplation of one object of sight and presented another.

This fact, that certain characteristics of art are wellnigh entirely dependent upon form considered as significant, while certain others are equally dependent on form considered merely in itself, makes the tasks both of the art-producer and of the art-critic peculiarly difficult. To neglect the requirements of significance is to disregard the soul of art, that which is the very substance of its life; and to neglect the requirements of form is to disregard its body, that which is essential to its artistic effectiveness.

One might suppose that fundamental truths like these, however artists and critics might differ in their applications of them, would be accepted as self-evident. But this

is not the case. A writer in "The Nation," in criticising the author's "Art in Theory," informs his readers that "the true theory of the nature of art," the "development" of which theory he "commends to students of æsthetics," is that art is "the application to *anything*" —the italics are his own—"in the spirit of play and for pleasure only, of the principle of proportion. The arts," he goes on to say, "deal with a great variety of matter, and by no means all of them with representation. Music deals with pure sound," etc.; and again, as if there were no necessity for poetic harmony as explained in the last essay, "Rhyme and rhythm added to the expression of thought make poetry; sound"—and the contrast indicated here, as well as the whole surrounding context shows that he means sound irrespective of its expressional possibilities —"sound submitted to the laws of harmony and melody becomes music." Notice the following, too, from "The Independent": "The author"—of "Art in Theory" —"has apparently found a dim clue in the antagonisms which figure for so much in the evolution of scientific theories, and allowed it" *i. e.*, the distinction between significance and form, "to beguile him into the belief that it might be worked into a theory of art. . . . The distinction exists for critical purposes"—and if so, why should it not be used in a critical essay?—"but has little importance in reality. Art is simply, wholly and entirely a matter of form . . . the best critical opinion nowadays assumes the identity of the art-form with the art-meaning." Yes, nowadays; but there have been times when the best critical opinion was represented by men like the poet Schiller; and he did not think it superfluous but essential to point out, in his "Letters on a Man's Æsthetic Education," that, in art, "form without subject-

matter is the shadow of a possession, and the utmost dexterity of art in expression is useless to him who has nothing to express."

Goethe once said that his poetry had been a continual confession. Suppose that it had been merely a confession. Would this alone have made him the greatest poet of his time? To become such, did he not need, besides thinking of the significance of that which he was to say, to think also of the form in which he was to say it? And was not the significance one thing, and the form—the versification—another thing? And might he not have paid attention to the one, and not to the other? Most certainly he might. But more than this is true. If his attention had been directed chiefly to the significance, he might have ranked with Wordsworth; if to the form, with Swinburne. But just because it was directed exclusively to neither; just because he had a "dim clue" through which he was "beguiled" in a matter of "little importance," he was careful to pay due regard to both, and, by maintaining the proper balance between them, to rank where he does—with Dante and Shakespeare. So in painting and sculpture. The figures of Benjamin West and Julius Schnorr are arranged more effectively than many a most spectacularly significant climax in a drama; those of Balthasar Denner and Florent Willems manifest the most scrupulous regard for the requirements of line and color. Yet because exclusive attention to either significance or form led all of them to neglect one of the two, they never can rank with artists of which this was not true—Raphael, Titian, and Rubens.

The same is true with reference to architecture. Fifteen years ago everybody in Boston was talking about "sincerity" in art. As applied to building a house, this

meant that every respective bath-room, or closet, or staircase should be indicated on the exterior by a significantly constructed window, or blank space, or protuberance,—a thoroughly sound principle so far as it was applicable. But with the narrowness and the lack, in a distinctive sense, of *comprehension* characterizing the artistic notions of our country, the principle was applied to everything—to every exterior effect, for instance, without any regard to any requirements of proportion or harmony. The result was those developments of the "Queen Anne" style, which even the unbalanced conceptions of American criticism had sense enough to nickname "Bloody Mary" and "Crazy Jane." Probably, however, even these were an advance upon the method pursued in the construction of the old Douglas Park University of Chicago, a huge Gothic building, the exterior of which is said to have been actually completed before any attempt had been made to decide upon the rooms or halls to be placed in the interior. Why should this not have been the case? In those days, when men wanted a meat market or a prison, they put up indiscriminately what was supposed to resemble either a Gothic cathedral or a Greek temple. There is no necessity of stopping to argue how far all buildings manifesting so partial a regard for the requirements of art rank below one in which the claims of both significance and form have been given due weight, whether it be a private house or a public hall, a villa on the Rhine, or a cathedral at Cologne.

And so with music. The difference between a melody of Offenbach and the least successful *recitative*-work of Wagner is the difference between treating musical form as if it were wholly a matter of form, and as if it were wholly a matter of significance. The difference between both and

the best music of Wagner, and of Mozart, Beethoven, and Sullivan, too, is that in this latter the equilibrium between the two tendencies in art is maintained. The essays on "The Genesis of Art-Form" and "Rhythm and Harmony in Poetry and Music" have shown what is necessary in order to develop musical form considered as form. The following essay is intended to show what is necessary in order to choose as the germ of such development, a form that is significant of a particular phase of feeling.

MUSIC AS A REPRESENTATIVE ART.

CHAPTER I.

REPRESENTATION IN SONG AS CONTRASTED WITH THAT IN SPEECH.

The Sustained Sounds of Singing and the Uusustained of Talking—The Former as Developed in Music and the Latter in Poetry—Differences between these Two Methods of Vocal Representation—Music as Necessitating Sustained Sounds—The Germs of its Representations are Mainly in Inarticulate Utterance, Instinctive and Associative, rather than Imitative and Comparative—The Representation of Speech, also Dependent partly upon Inarticulate Intonations—How these are Related to the Various Developments of Music—Representation in Music not Distinct and Definite, as in Words—Darwin's Theory of the Origin of Music—Gurney's Comment on this—Further Comments—Why Music is not Made Definitely Intelligible or Imitative—How it Represents both Mental Processes and Natural Surroundings—The Mind of the Composer not Necessarily in the Mood Naturally Represented by his Music—His Relation to this Mood that of a Painter to the Mood Represented in his Model's Pose.

WHEN a man, or any living creature, gives vocal expression to moods that control him, there are two distinct forms which this may assume, both of which, however, all creatures cannot always produce. The sounds may be either sustained or unsustained. A dog, for instance, howls, and also barks; a cat purrs and also mews; a bird warbles and also chirps; a man sings and

also talks. If these forms be at all representative, the sustained sounds must represent something sustained, and the others something not sustained. As a rule, an internal mental process is continued or sustained because it is not interrupted. As a rule, too, that which interrupts is external to the thoughts and feelings which constitute the factors of this process. Interrupt the creature producing the sustained sounds,—go out at night and speak to your howling dog, take the milk from a purring cat, the nest from a warbling bird, or the plaything from a singing child, and at once you will hear sounds of the other form, —barking, mewing, chirping, or scolding in words. We may say, therefore, that the sustained form is mainly subjective, or spontaneous, and that the unsustained form is mainly relative or responsive. Birds and men instinctively sing to meet demands that come from within; they instinctively chirp or talk to meet those that come from without. The singing sounds continue as long as their producer wishes to have them; the chirping and talking sounds are checked as soon as they have accomplished their outside purpose, and are continued only by way of reiteration or else of change, in order to suit the changing effects that they are perceived to have upon the creatures or persons toward whom they are directed. It is not essential that the sustained, singing sounds should convey any definite intelligence to another, because there is no intrinsic necessity that he should understand them. But the unsustained sounds must convey definite intelligence, because this is their object.

These two conditions respectively correspond, as will be observed, to those that underlie effects in music and in poetry. It is to be shown, in the discussion which follows, that there is a sense in which the former art as well as

the latter is representative; but it is important to notice that the two arts are not representative of the same conditions. Therefore they do not represent in the same way nor to the same degree either mind or nature. Music gives expression to certain classes of sustained and subjective moods, joyous or sad, concerning which there is no outside or objective reason for imparting any specific or definite information. The moment intelligence of a particular mood needs to be communicated thus, as in cases of outside emergency of an ordinary character, or of those exciting one to extraordinary petulance or rage, then the dog barks, the bird chirps, and the man, in order to make himself distinctly understood, uses his throat, tongue, and lips in the various ways that cause the distinct articulation which characterizes words.

It is important to notice, too, that this difference distinguishable between the lowest and most elementary forms of these two methods of vocal representation is the only one that is fundamental. All the other distinctions that can be made between sounds characterize alike those of song and of speech. As will be shown in the next chapter, sounds differ in *time*, *force*, *pitch*, and *quality*. According to the first, one sound may have more duration than another. Artistically developed, in connection with force, this difference leads to rhythm. But there is rhythm in poetry as well as in music. According to the second, one sound may be louder than another. But this kind of emphasis is as common in conversation as in chanting. According to the third, one sound may be higher in the musical scale than another. Artistically developed, this leads to tune. But the voice rises and falls in speaking as well as in singing. According to the fourth, one sound may be more sweet and resonant than another. But the differ-

ences between pure, orotund, guttural, pectoral, and aspirated tones, are as decided as are those between the tones in different parts in singing and between the characters of the sounds produced by different musical instruments.

When we come to use the word sustained, however, we can say that in music a tone is sustained in time, with a degree of force, at one pitch, and with one kind of quality, in a sense that is not true as applied to speaking. We may use articulated words in a song, yet there is a radical difference between singing them and talking them; and, so far as concerns merely musical effects, these can be produced, as is often the case not only in instrumental but even in vocal music, without any of the effects produced by articulation.

It is possible to separate even more clearly the original germ of musical representation from that of poetry. As shown in Chapter XX. of "Art in Theory," the elementary tendency mainly developed in music, is found in those instinctive and always inarticulate ejaculations or more prolonged utterances, as of fright or of pleasure, which are natural to a man, and these utterances, when, intentionally or artistically repeated for purposes of expression, come to mean what they do in fulfilment of the principle of *association*. The elementary tendency mainly developed in poetry is found in those forms of articulation used after expression ceases to be wholly instinctive and becomes reflective; and in these forms of articulation, as shown in Chapter I. of "Poetry as a Representative Art," a man begins to imitate what he hears and to make his utterances mean what they do in fulfilment of the principle of *comparison*. At the same time, as pointed out in the same place, association and comparison are closely allied; and, even when they are most different, expression

is developed with completeness in the degree only in which it manifests some traces of both.

Even speech, for instance, while meaning what it does on account mainly of articulation is, in part, also dependent, precisely as is music, upon that which is not articulation —but what we term intonation. A babe too young to talk, a foreigner using a language unknown to us, or a friend talking at such a distance that his words are indistinguishable, can each, notwithstanding this disadvantage, reveal to us something of his meaning. We can tell from his tones, aside from his words, whether he be excited or calm, elated or depressed, pleased or angered, earnest or indifferent. The effects thus produced spring, evidently, from a natural tendency which causes the movements or directions—what we might term the general methods of the voice—to correspond to those of the motives that actuate one.

On account of this expressional tendency to fulfil, either by way of association or of comparison, what may be termed *the principle of correspondence*, the intonations of speech may be said to be, in a true sense, representative. All of us must be aware that an acquaintance can be recognized in the dark largely because his conversation is characterized by similar ways, at certain definite intervals, of moving and checking and pitching his utterances; in other words, because he has a certain rhythm and tune of his own. Make one a public speaker or a reciter of stories, like the minstrel of former ages, and these movements of the voice will be made by him with more art and more regularity. Hence the origin of rhythm, as well as of chanting, among those story-tellers who were the first poets. Make the rhythm a little more marked and regular and arranged in clauses of the same length, on the principle of putting

like with like, and we have verse. Make the rhythm still more marked, by the use of similar sounds at regular intervals, and we have rhyme. Vary the rhythm to express different ideas or classes of ideas, and we have the various kinds of metre. Vary the rhythm still more, as well as the upward and downward movements of the voice constituting the tune or chant, and, in connection with this, pass from unsustained to sustained tones, and we have a musical melody. "We are justified in assuming," says Helmholtz, in Part III., Chapter IX., of the "Sensations of Tone," "that, historically, all music was developed from song. Afterward the power of producing similar melodic effects was attained by means of other instruments, which had a quality of tone compounded in a manner resembling that of the human voice." Of course, in connection with the development of melody and the invention of musical instruments came the arrangement of notes in musical scales and the beginning of harmony; but these have to do not with representation in music, but with the methods of elaborating the form of representation. At present, it is sufficient to notice that, when once we have a melody sung in the notes of a scale, we have but to combine certain of these notes, that is, to sound *do*, *mi*, *sol*, not successively but simultaneously, and we have harmony. If, now, we produce both melody and harmony on different musical instruments, and, in connection with these, sing without articulating words, as, in fact, most singers do, we can yet produce intelligible music; or we can cease to use our voices at all, and still do the same.

Evidently, there is nothing to prevent the sounds as thus developed from continuing to be representative. At the same time, as has been intimated, there is no reason why they should be representative in a way as unmistak-

ably distinct and definite as we find in language; and they are not so. Berlioz, we are told, used to amuse himself by singing tunes with Italian words, and waiting till his hearers had demonstrated how successfully the character of the Italian verse had inspired the composer, when he would inform them that the music was from a symphony of Beethoven. We must all have noticed, too, how scores of different sets of words, describing or expressing by no means the same experiences or conceptions, may often, with equal appropriateness, be sung to the same melody. But, while this is so, it is worthy of note that in certain general features, especially in expressing certain phases of feeling, all these verses must be alike. They must all, for instance, be either joyous or sad, or represent either elation or depression. With this general and mainly emotive method of representation, music must be content.

It may not prove uninteresting in this connection to refer to a theory advanced by Darwin in his "Descent of Man," Part II., Chapter XIX. He first notices the fact that most of the sounds corresponding to those of singing are made by the birds and lower animals—frogs, toads, tortoises, alligators, etc.,—during the season of breeding, and mainly by the males; also, that a certain kind of music is found among the most barbarous people, and that not only among them, but among civilized people also, it has power to excite emotions of tenderness, love, triumph, and ardor for war. The sensations and ideas excited in us by music, he says, appear "from their vagueness yet depth, like mental reversions to the emotions and thoughts of a long past age." He adds:

"All these facts . . . become, to a certain extent, intelligible if we may assume that musical tone and rhythm were used by the half-human

progenitors of man during the season of courtship. . . . In this case, from the deeply-laid principle of inherited associations, musical tones would be likely to excite in us in a vague and indefinite manner the strong emotions of a long past age. . . . The suspicion does not appear improbable that the progenitors of man, either the males or the females, or both sexes, before they had acquired the power of expressing their mutual love in articulate language, endeavored to charm each other with musical notes and rhythm. The impassioned orator, bard, or musician, when, with his varied tones and cadences, he excites the strongest emotions in his hearers, little suspects that he uses the same means by which, at an extremely remote period, his half-human ancestors aroused each other's ardent passions during their mutual courtship and rivalry."

In commenting on this passage, Gurney, in his "Power of Sound," Chapter VI., says:

"Whether or not the theory commends itself on its own merits, there is no reason why it should seem derogatory to the art whose effects it would in some measure explain; for, at any rate, the differentiation in question is so complete that transcendentalists can easily afford to ignore the early steps of it. . . . Those who believe in the expression of spirit through matter need find no difficulty in the sublimation of a spiritual language out of unspiritual associations. . . . What was primarily a simple ultimate pleasure which the organism was adapted to receive, might well become, in time, capable of opening the floodgates to mighty emotions . . . and so to tell us of things we have not seen and shall not see."

These views are of interest here chiefly on account of the confirmation that they afford of the antiquity of the musical element. In attributing a conscious and non-subjective design to these sounds, however, if in nothing else, Mr. Darwin seems to have lost sight of a very important fact with reference to all expressions of this character. A man sings or hums during courtship, not to show himself off to his sweetheart, but to give vent to his joy in having a sweetheart. She may be charmed by the result, but his first object is less to do something for her than for himself; and if this be the case with a design-

ing creature like man, how much more likely is it to be so with birds and other creatures governed mainly by instinct! Nor must it be supposed that what Darwin suggests, though it may be the main motive, is the only one underlying singing in these lower orders of life. The solitary canary in his cage will sing just as sweetly when the morning's light arouses him as the lark looking down upon his mate in the nest below him.

In short, there seems to be no way of getting a true conception of the nature of musical form, except by recognizing, as all will readily do, that in natural music, with which, as distinguished from artistic music, we are now dealing, sustained sounds, as distinguished from the unsustained sounds that we hear in speech, represent sustained emotive processes. The fact that they are sustained leads us to infer that the mind is in a subjective state, and influenced only slightly by external considerations. The slightness of this influence, moreover, sufficiently explains both why the forms of music are not made definitely intelligible to a listener, and also why they contain so little of the imitative element. A man in the subjective, absent-minded condition in which he takes to humming, is usually equally unconscious of the presence either of surrounding persons or of sounds. He is not in a mood, therefore, either to address the one distinctly, or to repeat the other accurately.

While this is true, however, it is also true that the sounds produced by him will necessarily, not in a specific but in a general way, represent both his own mental processes and his surroundings. Take any uncultivated person, for instance, who has not learned to conceal and so, to a certain extent, to misrepresent his moods. We shall find that the intonations of the tune hummed by

him, like his gait, will inform us at once of the general tenor of the motive impelling him; whether, for instance, it be hopeful or desponding. This accords with what has been said already. But besides this, if he have ever heard, especially if he have heard frequently, sounds like the humming of bees, the whistling of winds or of railway locomotives, or the notes of squirrels, quails, whippoorwills, robins, catbirds, or of songs sung by men and women about him, in nine cases out of ten, his own tones, at times unconsciously to himself, but nevertheless actually, will imitate some of these sounds, all of which, being external to himself, are, so far as he is concerned, those of external nature. Natural music, therefore, is representative both of man and of nature.

The art of music begins when a man becomes interested in natural music to such an extent as to be led to develop its forms for their own sakes (see "Art in Theory," Chapter VIII.). For instance, one in an absent-minded way may be singing, or listening to others who are singing. Suddenly some feature of the sounds attracts his attention, and he starts to experiment with them; and soon, as a result not of absent-mindedness now, but of present-minded design, he produces a melody. This process needs only to be carried on by different men for a few centuries, and it will lead necessarily to elaborate works of art, the development of a system in accordance with which they may be composed, and the invention of all sorts of musical instruments on which to execute them.

Notice particularly that the composer of this artistic music need not himself always be in the mood naturally represented by it. "Critics," says Schumann, in one of his letters, "always wish to know what the composer himself cannot tell them. . . . Good heavens! will the

day ever come when people will cease to ask us what we mean by our divine compositions? . . . Where a youth of eighteen hears a world-famous occurrence in a musical work, a man only perceives some rustic event, while the musician probably never thought of either, but simply gave the best music that he happened to feel within him just then." And Mendelssohn says: "If you asked me what I thought on the occasion in question, I should say the song itself, precisely as it stands."

It is evident that the relation of the composer to the mood naturally represented by his music is analogous to that of a painter to the mood naturally represented by the pose of his model. All that the musician needs to do, is to take some musical movement resulting from a particular mood, and develop his composition in a manner analogous to this movement, or consistent with it. But in order to do this successfully as a result of art, it is evidently imperative that he should first make himself thoroughly familiar with the motives and methods of music as an expression of nature.

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CHAPTER II.

REPRESENTATION THROUGH MUSICAL DURATION AND FORCE: RHYTHM.

Similarity of Poetic and Musical Representation—Representative Intonations of Elocution—Through Duration, Force, Pitch, and Quality—Discoursive or Associative and Dramatic or Comparative Elocution—Each Representative according to the Principle of Correspondence—Musical Duration as Representative—Musical Duration as Representative of both Mental Moods and Natural Effects—Illustrations—Musical Force as Representative of both Mental Moods and Natural Effects—Rhythm as a Combination of Effects of Duration and Force—Significance of Rhythm—As Representing Moods of Buoyancy and Exhilaration—Confidence, Triumph—Self-Poise, Dignity—The Gliding, Yielding, Graceful—Hesitation, Doubt—Disturbance, Turmoil, Confusion—Imitative Effects—Forging—Flight Downward — Upward — Snakes — Water—Flowing Ease—Giants' Tread.

MUSIC has been said to represent sustained mental processes, and yet to do this in only an indefinite and general way. The most general way of doing it, however, involves differences in the methods of giving expression to different phases of these processes. It would be in order, therefore, at this place, to enter into a full discussion of these different methods. But the effects of music are subject, in the main, to the same laws of sound as are those of poetry; and, as presented in book form, poetic effects are much the more easy of the two to illustrate. For this reason, as well as because what the author had to say of poetry in this connection was first prepared for publication, an extended treatment of many of these

methods, with the exact significance represented by the different phases of each of them, has already been given in the volume entitled "Poetry as a Representative Art," Chapters IV. to XII. inclusive. Of course, much that was said there, it would be superfluous to repeat here. But enough will be recalled to render the general subject intelligible to the reader, and enough added to show its bearing upon the special art now to be considered.

An endeavor to ascertain the elements of representation in sound suggests, at once, a reference to the art of elocution. This art has the power of producing through the intonation of words, irrespective of their articulation, an almost endless variety of effects; and the argument is logically irresistible that these effects are the same in kind as those of music. What, then, are the elements of elocutionary effects?[1] A moment's consideration will cause us to recognize that there are four of these. They can all be perceived by emphasizing strongly the first syllables of *barbarous, murmuring, tartarize, Singsing,* or *papa;* or by emphasizing a word like *go* in the sentence "I will *go* if so." In giving the emphasis it will be noticed that the emphatic syllables and the word *go* are made to differ from that which accompanies them, first, in *duration:* they are sounded in longer time; second, in *force:* they are sounded with more energy; third, in *pitch:* they are

[1] The signification of the methods of elocutionary representation to which, in this essay, those of music are correlated, may be found detailed in full in the author's "Orator's Manual." This book, first issued in 1879, has had an increasing sale—as seems to be the case with "Poetry as a Representative Art"—every year since the date of its publication, and it is not too much to say that, since that time, no other treatise of acknowledged merit upon the subject has been produced in which, however much developed, the explanations then made for the first time have not been adopted without virtual alteration.

sounded on a key which, if used in music, would be relatively higher or lower in the musical scale; fourth, in *quality:* they are sounded with more fulness or thinness of tone. Simply by increasing the degree in which any of these elements enter into ordinary accentuation, we can increase the degree of emphasis represented by them.

With reference to these four elements, it may be well to notice, further, that duration is merely an external effect of sound, while force, pitch, and quality are all essential to the very formation of it; different degrees of force, as we learn from science, being determined by the relative size of the vibrations causing the tone; of pitch, by their relative rapidity; and of quality by the relative size and rapidity of those compounded together in order to produce any apparently single tone—almost every tone, as science has ascertained, being a compound.

Now let us consider the significance of these elements.[1] In elocution as in music they all represent emotive effects; but, at the same time, each represents a certain phase of these effects. Moreover, in elocution each of these phases is manifested in two ways, one of which may be termed *discoursive* and the other *dramatic.* Discoursive elocution, generally termed that of emphasis, is developed from *instinctive* methods of expression, and corresponds, in this regard, to words formed from ejaculations. It is used mainly in oratory. Dramatic elocution, generally termed that of personation, is developed by the *reflective* powers as a result of impressions received from without. Mimicry, in some form, underlies all its effects; for which reason, it will be seen at once to correspond to words formed as a result of imitation, and to be the phase of delivery used mainly in dramatic acting.

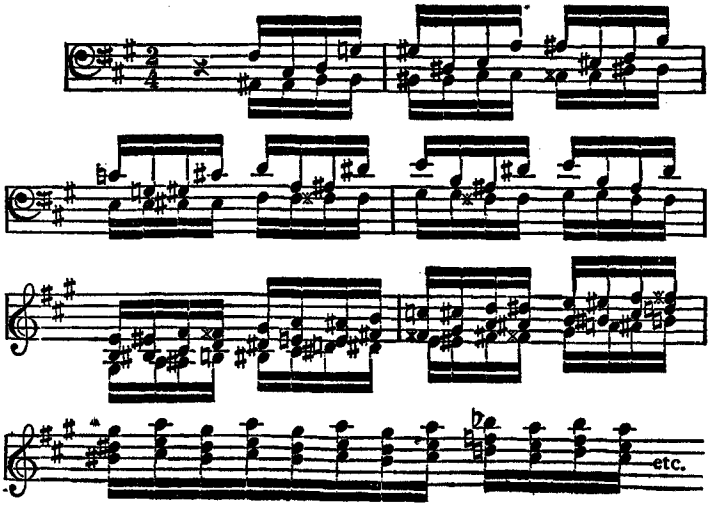
[1] See note p. 251.

Effects in this latter kind of elocution, of course, interpret themselves. In discoursive elocution they need further explanation. As used in this, however, it may be said in general that they are based, in just as true a sense as if they were more clearly imitative, upon the principle of *correspondence*, in accordance with which it seems to be instinctively felt, even when not consciously thought, that different phases and movements of invisible and inaudible mental moods have their analogues in different forms and operations in the visible and audible world. In fulfilment of this principle, it is recognized in ways that will be explained presently that the element of duration *measures* the utterances, indicating, according as they are short or long, whether a subject is conceived to be of slight or of great importance. This interpretation of the meaning of duration, by the way, shows how appropriate the art-term *metre* or *measure* is as applied not only to form but to thought, in all cases in which the form accurately embodies the thought. Again it may be said, for reasons that will be given hereafter, that force, in giving greater or less loudness to utterance, *energizes* it; that pitch, by interpreting the motive, *aims* it; and that quality, by manifesting the kind of feeling, *tempers* it. Besides this, it is well to notice that duration and force together are essential to the effects of *rhythm*, and pitch and quality together to those of *tune;* rhythm resulting from the measuring of time or movement by regularly recurring impulses perceptible in the physical world, and tune from a similar cause, detected only by scientific analysis, operating through vibrations upon our inner nervous and mental organism.

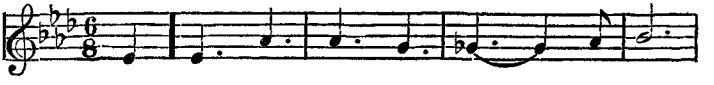
These statements, however, are only preliminary. Let us pass on to see how the principle of correspondence as

fulfilled, both in associative or discoursive, and in imitative or dramatic, elocution can be made to apply to music; and first to the elements entering into *rhythm*, namely, *duration* and *force*. Considering *duration* for a little without reference to force, it is evident that, from noticing the absolute or relative time of movements in what we hear and see in nature, we can learn that of which, both in words and deeds, a fast pace and a slow pace are indicative; and that we can infer from this that of which rapid sounds and slow sounds are indicative. Through the aid of this test, we find that *rapidity* is indicative, by way of association, of moods that are *joyous* or *mirthful;* or, as applied to special thoughts or feelings, of such as seem deserving of only brief consideration because they are *light* and *trifling;* and, as applied to natural effects influencing such moods, that it is indicative, by way of comparison or imitation, of those actually exhibiting *quick motion*. *Slowness*, on the contrary, is indicative of *grave* and *serious* moods; of thoughts and feelings worthy of long consideration, therefore, of *dignity* and *importance;* and of natural effects that exhibit a *retarded motion*.

What has been said hardly needs illustration. Everyone can recall the general difference in rapidity between ordinary dance-music as it is termed, and church music; or between a hornpipe and a hymn; and he knows, too, that this difference is determined by the fact that the former represent by way of association, joyous, mirthful, light, trifling moods and that the latter represent the opposite. The same fact will be recognized almost as readily to be true of movements designed to be representative not so much of moods, *i. e.*, of thoughts and feelings, as, by way of comparison or imitation, of outward material effects. To prove this, take some of the motives, as they

are termed, of the operas of Wagner, from whom, as not only the most modern but the most prominent of representative composers, it is appropriate that the most of our illustrations with reference to this subject should be drawn. Fortunately, too, these motives have been put into such forms of notation and given such titles that no one need hesitate in a treatise like this to point to them as authoritative. Without further acknowledgment, it is enough to say that those that are to be used in the pages following, are to be found, in the form in which they are presented and with the titles assigned to them, either in the "Guide through the Music of Richard Wagner's Ring of the Nibelung" of Hans Von Wolzogen, or else in the "Wagner's Tristan und Isolde" of Gustav Kobbé. Here, to begin with, is (1) the "Motive of Loge," the spirit of flame, taken from "The Rhinegold." Notice the appropriate-

No. 1.

ness, not so much now of the alternating upward and downward directions of pitch, to which reference will be made hereafter, as of the rapid motion through which the flickering and fluttering of the flame is represented.

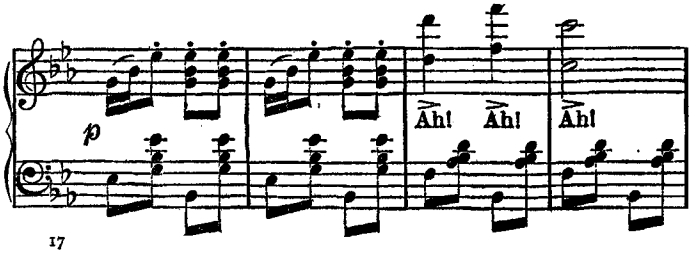
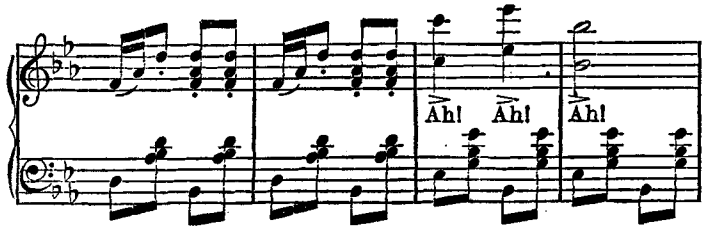
Notice the equal appropriateness of the slow time given to the "Motive of the Love-Death," in "Tristan und Isolde": (2.).

No. 2.

Passing on now to *force*, there is no difficulty in finding what it too, represents, through observing the manifestations of it in nature. *Great force*, involving loudness of tone, indicates, of course, great *energy*, either of body or of mind; as in expressions of *earnestness, strength, self-assertion, vehemence.* Notice the music on page 272 in Chapter III., numbered 28 and 29. For an analogous reason, *slight force* involving softness of tone, indicates the opposite, *i. e., little energy*, as in expressions of *indifference, weakness, gentleness, mildness.* Notice the music numbered 9 and 81. In addition to this, it follows, as a matter of course, that great force represents that which has a *loud sound*, or is so *vast in size* that its sound would be loud if it produced any; and that slight force represents that which has a *soft sound*, or is so *small* that it would have this if it produced any. Notice the music numbered 14 and 16.

The most important use of force in music, however, and the same is true of duration, is in cases in which both of these elements combine in order to produce effects of *rhythm;* in cases, that is, in which neither duration nor

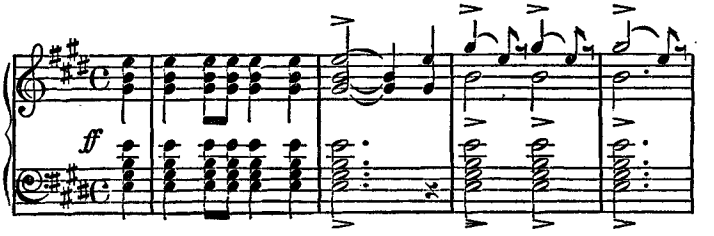
force is general or absolute but special or relative, different notes that follow one another being distinguished by different degrees of length and loudness. It is in rhythm, too, that the representative features of both elements become most apparent.

A full discussion of the different kinds of rhythm, or of the significance of each kind of it, is not needed here. The former subject is discussed in Chapters I. to VI. of "Rhythm and Harmony in Poetry and Music," and the latter subject in Chapters IV. to VIII. of "Poetry as a Representative Art." In this place, it suffices to say that rhythm is produced by accenting—sometimes through duration alone, sometimes through force alone, but usually through both in combination—certain tones separated from one another by exactly the same intervals of time. In music these accented tones, as a rule, begin measures. They are the tones immediately following the perpendicular lines termed *bars* in the music below. In poetry, the accents are sometimes at the ends, and sometimes in the middles of the measures.

With reference to the significance of rhythm, it may be said that when it is regular and strongly accented, like the steady pace and tread of a vigorous man or of a file of soldiers, it indicates conceptions like those of buoyancy and exhilaration, as in the galop (3):

17

No. 3.

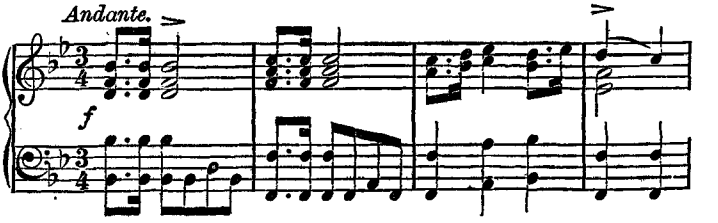
—Tout a la Joie: Phil. Fahrbach.

Of confidence and triumph, as in the Marseillaise Hymn, (see music No. 28) or in the ordinary march (4):

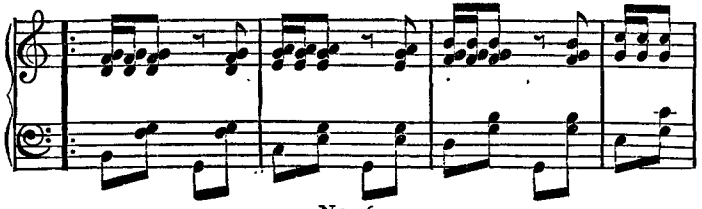


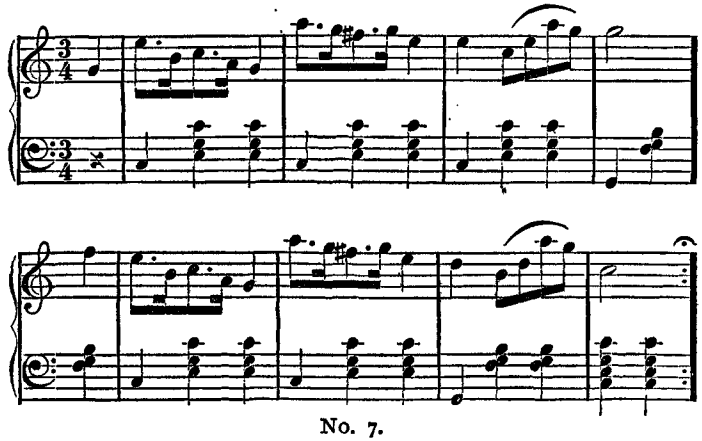
No. 4.

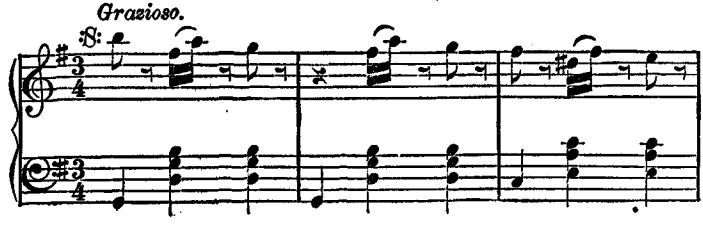
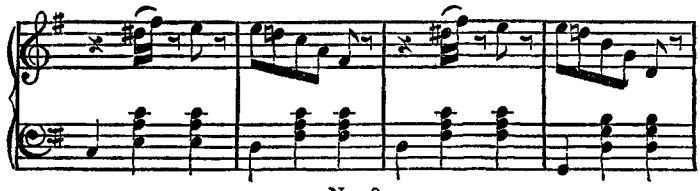
—Among Comrades March: Carl Faust.

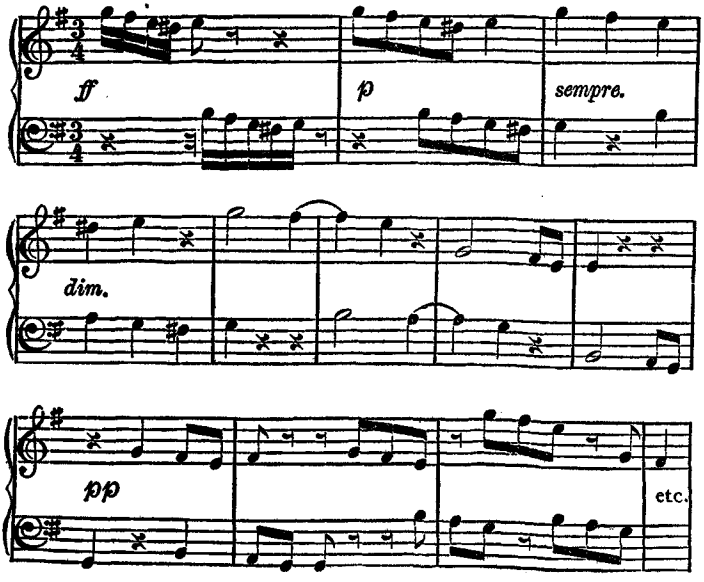
Also of self-poise and dignity, as in the minuet (5):

No. 5.

—Minuet de la Cour: C. Coote.

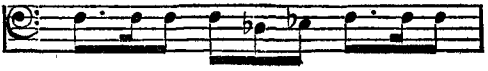
When the rhythm is regular, but with the accent given at somewhat unusual relative length or at unusual places, we have the gliding, yielding, graceful effects exemplified in the music in numbers 6, 7, and 8:

No. 6.

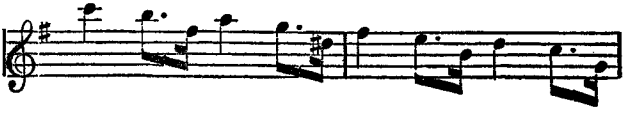
—*Bella Bocca Polka: Emile Waldteufel.*

No. 7.

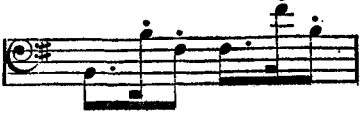
—*Glide or Polacca Quadrilles: William Coleman.*

No. 8.
—*Tres Jolie Waltz: Emile Waldteufel.*

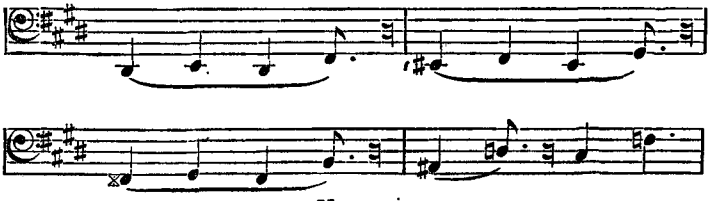
When the rhythm is not strongly marked, and is greatly varied, it indicates conceptions like those of hesitation and doubt, as in this passage (9) from Beethoven's pianoforte "Sonata in E Minor," op. 90, which, according to Gurney ("Power of Sound," XIV.), "is said to have been humorously connected with the indecision in the mind of a certain noble lover whose passion for an actress had been expressed in a preceding theme."

No. 9.

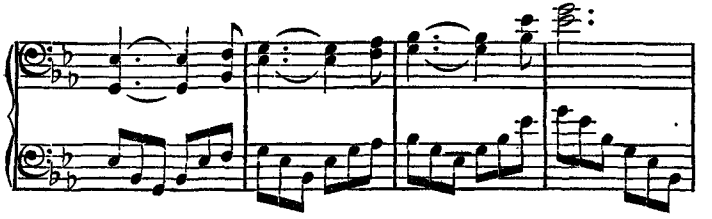
Greater and more abrupt changes of the same kind, either in duration, or force, or in both, represent, of course, greater degrees of similar emotions, until, when carried to extremes, they suggest, like explosive sounds in nature, the highest possibilities of disturbance, turmoil, and convulsion.

Rhythm that fulfils the principle of correspondence in that it produces not merely associative, but also comparative and so distinctively *imitative* effects, are also not uncommon. Notice the suggestion of hammering in the "Forging Motive" of Wagner's "Rhinegold" (10):

No. 10.

Also, in the same opera, the "Motive of the Flight" which accompanies the descent to the earth of Freia, the goddess of light and love (11):

No. 11.

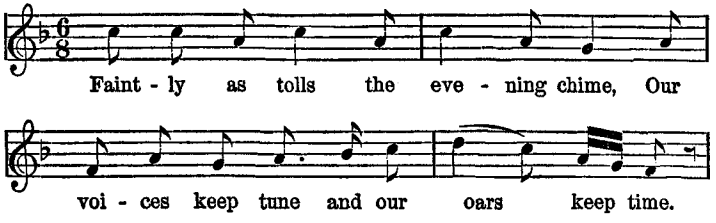
Which reminds us of the "Walküren Motive" or "Ride Motive" in Wagner's "Walküre," which also represents flying, but in this case flying upward (12):

No. 12.

In the "Rhinegold," again, we have the "Snake Motive" represented both in the rhythm and in the movements of pitch (13):

No. 13.

Also the "Motive of the Primeval Element," representing the gentle rippling of water as in a river (14):

No. 14.

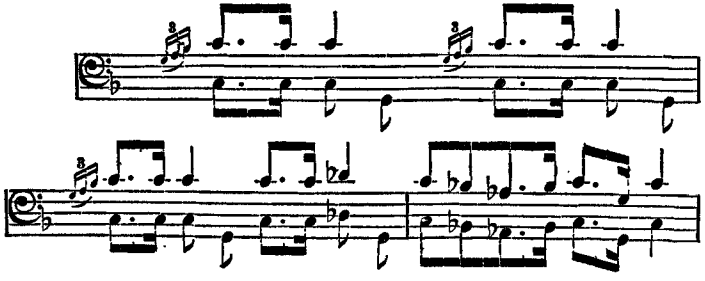
"In Venice," says Gardiner, in his "Music of Nature," "where the people are constantly moving upon the water, the motion of the boat suggests the flowing ease of triple time, in which all their celebrated airs and barcarolles are written. A beautiful illustration of this movement is to be found in Mr. Moore's words and music:

> "'Row, brothers, row; the stream runs fast;
> The rapids are near and the daylight past.'"

The first line of which is as follows:

No. 15.

—*Canadian Boat-Song: T. Moore.*

Notice, finally, as distinctly representing both force and movement, the "Motive of the Giants," from Wagner's "Rhinegold," in which we are supposed to hear the tread of their feet (16):



No. 16.

CHAPTER III.

REPRESENTATION THROUGH MUSICAL PITCH, HIGH AND LOW, UPWARD AND DOWNWARD.

Correspondences in the External World to High and Low Pitch—And to Upward and Downward Directions of it—Further Explanations—As Illustrated in Elocutionary Intonations—Gregorian Chants as Developed from Elocutionary Laws—Upward Movements in Musical Questions—In Anticipative Expectancy—Downward Movements in Effects that are Conclusive—Affirmative and Positive—Combined Upward and Downward Movements in Effects both Anticipative and Conclusive—The Same Rendered Emphatic—Imitative Effects: Upward as in Rising—Downward as in Sinking—In Both Directions.

IN accordance with the principle of correspondence the conditions of pitch, high or low, or its movements in directions upward or downward in the musical scale, seem to be in exact analogy with correlated conditions and directions with which we are all familiar in the external world of space about us; and, like them, to indicate the mental aim or motive. When, for instance, one is elated, he holds his head high, and his movements are varied like those of a buoyant schoolboy. When one is depressed, his head bends downward and his movements are few. It is the same with the utterances. A soaring bird sings in a high and changing key, a crouching man threatens or a dog growls in a low and monotonous key. High and varied tones, therefore, seem to represent elation of spirit, or that which is felt to be elevating in its influence; and low and uniform tones represent depression of spirit, or

that which is felt to be impressive. These statements will be found sufficiently illustrated by comparing the exhilarating music numbered 21, 22, 28, 29, 33, 40, 43, 45, 46, 66, with that of an opposite character numbered 2, 10, 16, 17, 24, 30, 34, 51, 52, 56, and 63.

The same is true with reference to movements in the *directions* of pitch. Its tendency, when two or more tones are heard in succession, may be upward or downward. When taking either direction, pitch follows laws applicable to all movement. Men lift their bodies, limbs, feet, when they start to do something. They let their hands fall at their sides and sit down or lie down when they get through with what they have to do. The lungs rise in inspiration and fall in expiration. So with voices in speaking. Their sounds rise when a man feels inspired to begin to say something, *e.g.*, "If só, I will go." They fall when the inspiration is over, because he is through saying it, *e.g.*, "If so, I will gò." In other words, to quote from page 47 of "The Orator's Manual," written many years ago, where ample illustrations of all the following statements will be found: "Upward and downward movements of pitch represent the mental motive. The voice rises when one is moved to open, and falls when moved to close, the expression of an idea. It must be borne in mind, however, that these directions of pitch depend upon the relations of utterance to the sense, and not merely to the sentence. If the sense does not close or open where the sentence does, the tones may fall before its close and rise at its end, *e.g.*, 'I will gò, if só,' 'Will you gó?' 'Nò, I wònt, if he 's thére.'"

We may extend, and, at the same time, explain this by saying that the voice rises for the purpose of opening or broaching an idea; that is to say, for the purpose of

pointing away from the thought immediately expressed, *e.g.*, when one is inclined to consider the words uttered as merely *anticipative* or *indecisive*, in the sense of being in themselves *subordinate*, *insignificant*, *trite*, *negative*, or *questionable*, as contrasted with something that is expected to be, or that has been, expressed by the falling inflection. On the contrary, the voice falls for the purpose of *closing* or *completing* an idea; that is to say, for the purpose of *pointing to* the thought immediately expressed, *e.g.*, when one is inclined to consider the words uttered as *final* or *decisive*, in the sense of being in themselves *interesting*, *important*, *noteworthy*, *affirmative*, or *positive*. The voice falls when giving its sentence in the sense either of having completed the expression of a sentiment or of having uttered something sententiously.

In order to recognize the degree in which, even in speech, intelligence of the motives that are directing the thoughts or feelings may be conveyed by methods other than by the mere articulations which cause the sounds to be words, notice, in the following examples, how the same phraseology may be made to convey entirely different meanings. Here the upward inflections, as given on the opening clauses, indicate anticipation, or the fact that what is expressed in them is subordinate and insignificant, as compared to what is expressed in the concluding clauses:

> The gay will láugh
> When thou art góne; the solemn brood of care
> Plod ón, and each one as before will chase
> His favorite phántom; yet all these shall lèave
> Their mirth and their employments, and shall come
> And make their bed with thèe.

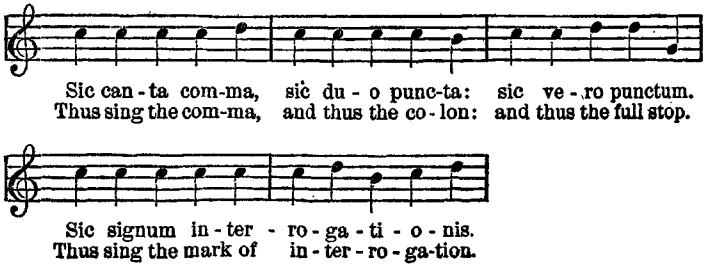
But here the downward inflections, as given on precisely

the same opening clauses, indicate conclusiveness, or the fact that what is expressed in them is interesting, important, and noteworthy, entirely aside from that which is expressed in the concluding clauses.

> The gay will làugh
> When thou art gòne; the solemn brood of care
> Plod òn, and each one as before will chase
> His favorite phàntom; yet all these shall lèave
> Their mirth and their employments, and shall come,
> And make their bed with thèe.

Notice also the following: "We all know his wórd is a little uncértain," indicates the trite, the well known. "We all know his wòrd is a little uncèrtain," indicates the noteworthy, the important. "There is a páth through the wóods hére," indicates indecision in view of the doubtful. "There is a pàth through the wòods hère," indicates decision in view of what is not considered doubtful. "It múst be so," indicates the questionable; "It mùst be so," indicates positive assurance. "He declaims very wéll," gives questionable praise to the mediocre; "He declaims very wèll," positively commends the excellent. "John has returned hóme," questions the action, and produces the effect of disapproval; "John has returned hòme," expresses, at times, just the opposite.

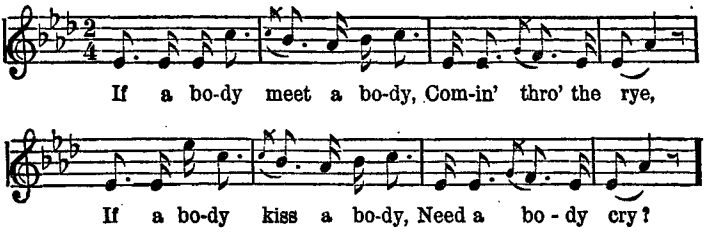
That similar principles apply to the movements of pitch in the melody of music, we might infer as a result of considering the subject theoretically. But we can not only infer it but perceive it as a result of a practical study of facts. Notice the following text, (17) which was connected with the notation of the Gregorian chants, written in the sixth century. Whether Pope Gregory (A.D. 590–604) originated these methods, or derived them from Pope Syl-


Sic can - ta com-ma, sic du - o punc-ta: sic ve - ro punctum.
Thus sing the com-ma, and thus the co - lon: and thus the full stop.
Sic signum in - ter - ro - ga - ti - o - nis.
Thus sing the mark of in - ter - ro - ga-tion.

No. 17.

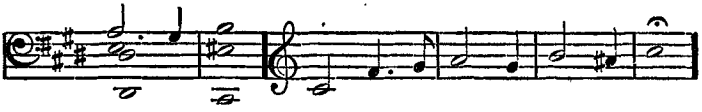
vester (A.D. 314–335), as is sometimes said, or from St. Ambrose (A.D. 341–397), or whether all of these derived them from the ancient Romans or the Greeks, it is now acknowledged that, historically, all our modern European systems of melody, and, through them, of harmony have grown out of these chants, or at least have come down to us through them. Could a stronger proof be afforded that music is a development of that which in its incipiency is representative? These chants to which, or through which, all modern music is traceable, were deliberately composed in order to be this, and nothing else.

The representative character of the movements of musical pitch is wellnigh equally manifested in modern melodies. Except where the significance of these depends upon their connection with harmony, which, as will be shown presently, introduces another principle, it will be found that almost always in the degree in which they commend themselves to general taste to such an extent as to continue to preserve their popularity, in that degree they parallel the movements natural to the speaking utterance of the sentiments to which they give expression. Notice, for example, how distinctly the theme of the following asks a question :



No. 18.

—*Comin' thro' the Rye: Scotch Melody.*

So, too, how both melody and harmony unite in order to produce this same effect in the "Motive of the Question to Fate," in Wagner's "Walküre" (19):

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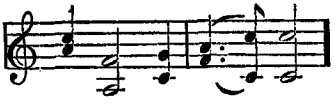
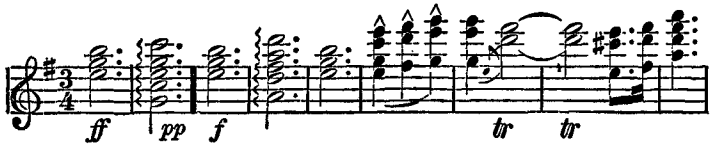
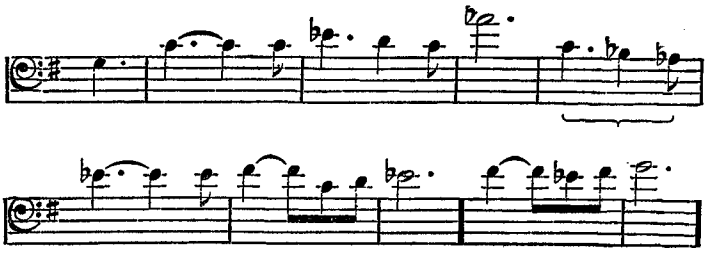
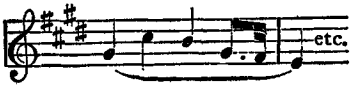
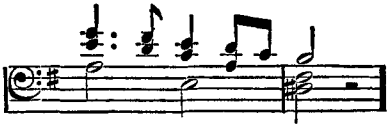
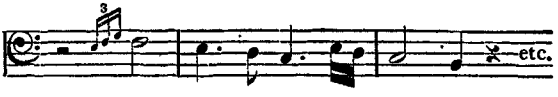
Notice, again, how distinctly the motive in Wagner's "Götterdämmerung," termed the "Wedding Call," expresses anticipation, and, in this case, in the absence of any minor tendency, joyous anticipation (20):

No. 20.

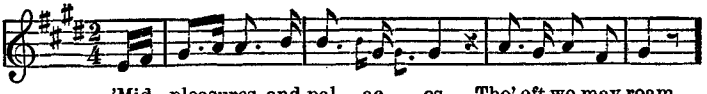
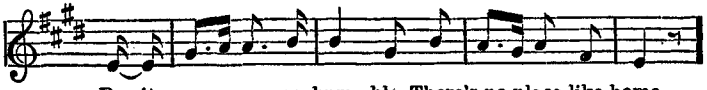
Again, notice how both harmony and melody join to emphasize anticipation carried to a pass of exuberant expectancy in the cry of *Brunhilde*, in the same opera, as waking from her sleep of ages she greets the world once more (21):

No. 21.

In the "Walküre" precisely the same feeling is conveyed by the "Motive of Siegfried the Wälsung," himself the representative of anticipative, buoyant, hopeful, enthusiastic youth (22).

No. 22.

In contrast to these, notice the conclusive effect of the downward movement in what is called the "Slumber Motive," suggesting rest from labor, in the "Walküre" (23):

No. 23.

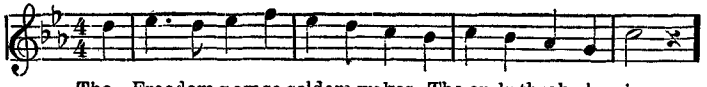
Also, in the same opera, the more affirmatively and positively conclusive effects of the "Motive of Renunciation" (24):

No. 24.

And of "Godly Wrath" (25):

No. 25.

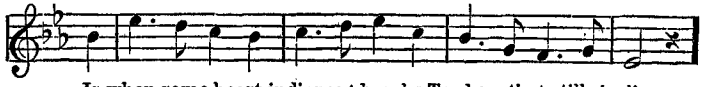
In most music, as in most speech, we have both anticipative upward movements and also conclusive downward ones. Here are both in a comparatively mild form:

'Mid pleasures and pal - ac - es, Tho' oft we may roam,

Be it ev - er so hum - ble, There's no place like home.

No. 26.

—*Home, Sweet Home: J. H. Payne.*



Tho Freedom now so seldom wakes; The on-ly throb she gives

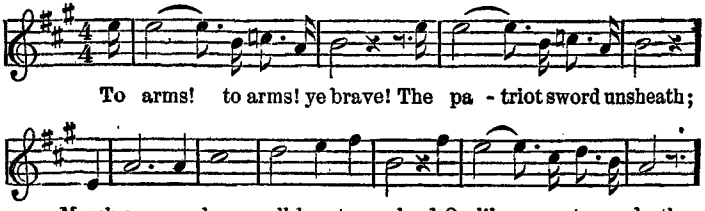


Is when some heart indignant breaks To show that still she lives.

No. 27.

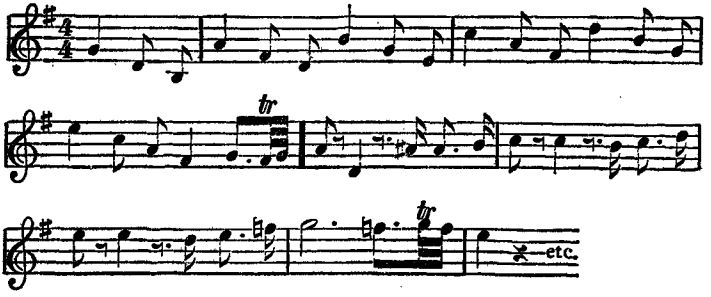
—*The Harp that once thraugh Tara's Halls: T. Moore.*

Here are both in a very emphatic form :



No. 28.

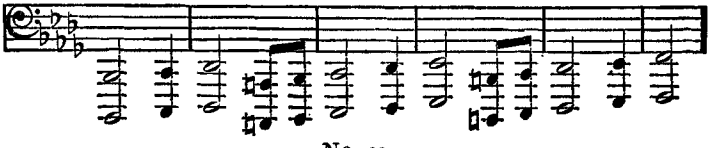
—Marseillaise Hymn : Rouget de Lille.

And in the peculiar combination in the following of both upward and downward movements, anticipation seems to be represented as certain of positive realization ; the English translation of the words set to the first line being, " Look how the rays of the sun streaming bright shed its radiance around, let 's be up and doing."

No. 29.

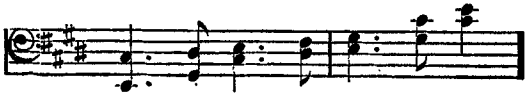
—Anvil Chorus, Il Trovatore : Verdi.

As illustrations of upward and downward directions of pitch, representative, in the sense of fulfilling the principle of correspondence in such a way as to be distinctly *imitative* of outward natural effects, notice in Wagner's

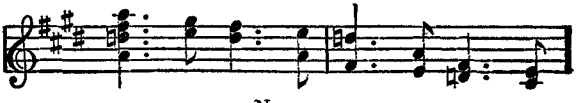
"Rhinegold," the "Motive of the Rising Treasure," the title of which should sufficiently explain its significance (30):



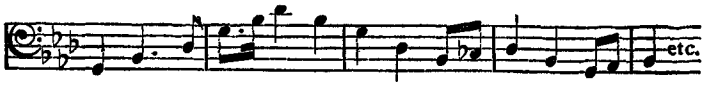
No. 30.

Also, in the same opera, in the "Motive of the Nornes," the representation of Erda, the mother of earth, as, with her daughters, the Nornes, she comes up from below (31):

No. 31.

and then the "Motive of the Götterdämmerung," which represents her as she sinks downward again (32):



No. 32.

Notice, also, further on in the same opera, the upward and downward representation in the "Rainbow Motive" (33):

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CHAPTER IV.

REPRESENTATION THROUGH MUSICAL PITCH: COMBINED WAVE-MOVEMENTS.

The Meaning of the Elocutionary Circumflex or Wave-Movements—Further Explanations—How these Conditions are Paralleled in Music—Illustrations of Inconclusive Uncertainty—Ending with Positive and Decisive Effects—Of Anticipation Ending with Finality—Of the Indecisive ending with the Decisive—Of Hope, ending with Doubt—Of Irony, Mockery—Other Illustrations.

BESIDES the simple upward and downward directions of pitch, there are cases in elocution in which, on a single emphatic word, the tones are made to move in both directions. The result gives us what is termed the circumflex inflection, or wave. Its representative effect, of course, is to indicate a combination of the motives naturally expressed by a movement in each of these directions. In other words, it points both *away* from an idea or feeling expressed as important on account of it's relation to something else, and it also points *to* the same idea or feeling as important in itself. We find this inflection, sometimes, in consecutive discourse, as in the following, where the speaker, in uttering the word *independence*, is thinking of its results, and of pointing *away* to them, as well as of itself and of pointing *to* it:

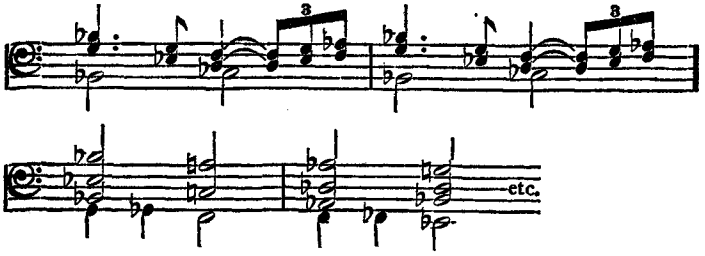
Set before them the glorious object of entire independence, and it will breathe into them anew the breath of life.

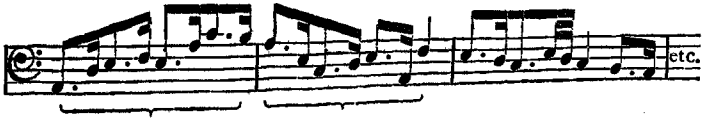
For a similar reason, to indicate that a word is used

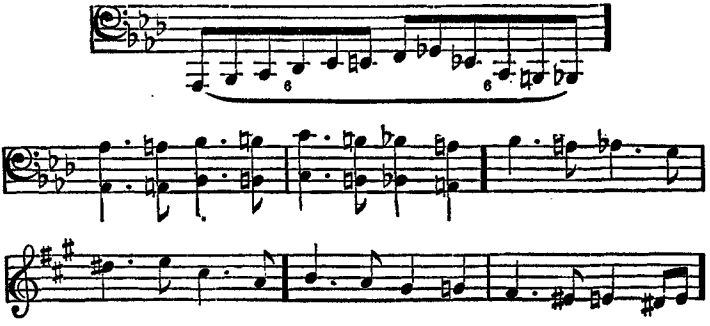
largely on account of its suggestions of other things, we find the same inflection in cases of *comparison*, as in "He is the Glâdstone of America"; and also in cases of *contrast*, as in "I did not speak of fĕeling, but of wîll." Once more, we find it used very strongly in cases of *double entendre* or equivocacy, involving innuendo, sarcasm, satire, mockery, irony, in which it is necessary to point away from the whole phraseology to a meaning that is not in it, but can be put into it by the intonations, as *e.g.*, in "Oh, hê is an hônest man, hê ĭs!"

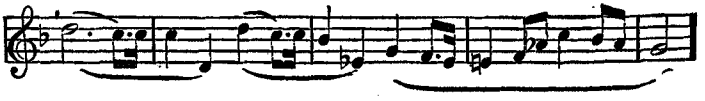
To understand the whole influence of this circumflex inflection, it needs to be added also that the direction, whether upward or downward, which is most strongly emphasized in it—which, in speech, is the direction with which it concludes—is that which indicates the predominating motive. If the conclusion be in the upward direction, the predominating motive is that which suggests the anticipative, indecisive, subordinate, insignificant, trite, negative, or questionable; and if it be in the downward direction it suggests the conclusive, decisive, or in itself interesting, important, noteworthy, positive, or affirmative. Both statements may be illustrated sufficiently in the sentence, "I did not speak of fĕeling, but of wîll."

Now notice how exactly these conditions are paralleled in music. First of all, glancing back at that numbered 29, it will be observed that in connection with the downward directions in the first four bars, the general movement, as emphasized in each of the longer notes, is upward. In this case, recalling that the downward movements are positive and decisive while the upward are anticipative and indecisive, we shall perceive why it is that in the predominance of the latter, the movement, as a

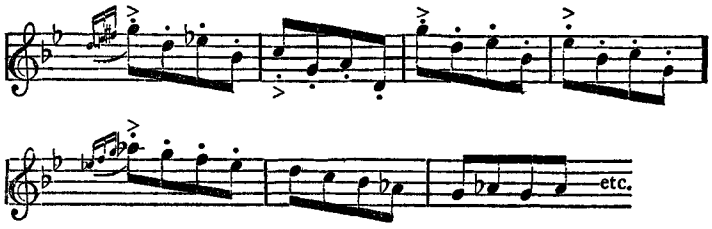
whole, has the effect of positive and decisive anticipation. So, too, in the "Motive of Loge," No. 1, we can perceive why it is that in connection with the alternating downward and upward directions, the predominance of the latter should represent not only the positive and decisive nature of the flame, but also, on the whole, its generally anticipative and therefore—inasmuch as, in itself, it is evil—threatening character. Here, again, in the "Motive of Growing Twilight," in Wagner's "Rhinegold" (34), we have these alternating directions, concluding with the downward movement; indicating, therefore, the inconclusive uncertainty of the change, ending, nevertheless, with conclusive certainty.

No. 34.

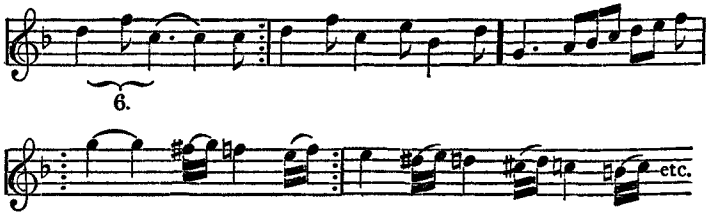
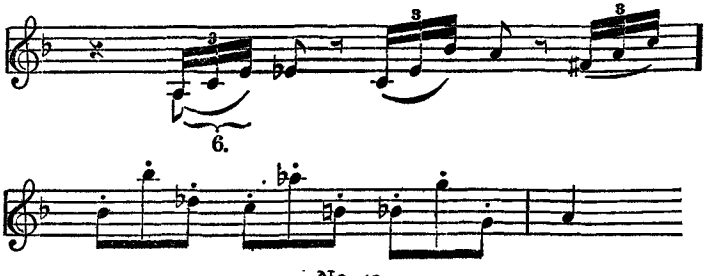
So, too, in the "Motive of the God's Trouble," in the "Walküre," we can perceive the influence of the two tendencies ending, as only, perhaps, would be possible in the experience of a god, with that which makes the positive and decisive predominate (35).

No. 35.

In the same opera we have, too, "The Motive of Pursuit," which, beginning with alternating movements that have more of anticipation than of finality in them, mounts upward, and then ends with more in them of finality (36):

No. 36.

In Fricka's coaxing song in Wagner's "Rhinegold," called the "Motive of Love's Fascination," which might better be called "of Coquetry," we can perceive the same alternation of the anticipative and indecisive with the conclusive and decisive, but, at the same time, with much more evidence of the predominance of the latter (37):

No. 37.

The same can be affirmed of the alternating hope and doubt expressed in the "Motive of the Love of Life" in the same author's "Siegfried" (38):

It has been said that the circumflex inflection or wave, pointing to and also away from a word, indicates not only a double reference, as in the case of an expression

No. 38.

embodying a comparison or a contrast, but also sarcasm, innuendo, irony, in that it clearly insinuates a meaning not at all indicated by the words aside from the intonations. Observe now how exactly the intonations appropriate for these suggestions are reproduced in Wagner's "Götterdämmerung" in what are called the "Motive of the Shout of the Fairies," No. 39, and of the "Fairies' Mockery," No. 40:

No. 39.

No. 40.

Distinctively *imitative* methods based upon these arrangements of pitch can be recognized sufficiently by noticing again the upward and downward flickerings of the flame in the "Loge Motive," No. 1, the indecision indicated in the passage from Beethoven, No. 9, the "Snake Motive," No. 13, and the "Water Motive," No. 14; as also by the phrases imitating the utterances of birds, hens, dogs, asses, and of men, when yawning, sneezing, and coughing, as illustrated in Chapter VIII.

CHAPTER V.

REPRESENTATION THROUGH BLENDING OF PITCH AS IN MUSICAL HARMONY.

Elocutionary Use of Pitch, when Indicative of Suspense—Blending of Harmonic and Inharmonic Intervals of Pitch, as Analogous to Effects of Quality—Meanings in Speech of the Major and the Minor Interval—Their Meanings in Music—Further Explanations—The Subdominant, Dominant, and Tonic—Complete and Incomplete Cadence—Explanations of their Effects—Meanings of Upward and Downward Elocutionary Harmonic Cadences—Illustrations of the Satisfying Effects of Upward Musical Major Cadences—Unsatisfying Effects of Upward Minor Musical Cadences—Satisfying Effects of Downward Major Cadences—Unsatisfactory Effects of Downward Minor Cadences—Wagner's Use of Upward Anticipative Movement Followed by Downward Minor Cadences.

THERE is still another form of elocutionary emphasis imparted by pitch, of which no mention was made in the preceding chapter. The voice may not only rise, fall, and do both, but it may also do neither. It is seldom, when there is emphasis, that there is absolutely no change in pitch. Where a word contains two syllables, one of them accented, it is impossible that there should be no change. But the change may be so slight as to suggest unmistakably neither that which is upward nor that which is downward. When this is so, the effect is evidently one of mere suspense, as in uttering the words:

"To die—to sleep—to sleep! Perchance to dream."
—*Hamlet, III., 1: Shakespeare.*

The applications and developments of this form of inflection, both in elocution and in music, but especially in the latter, are very important. So far as the tone is not absolutely upon one pitch, which, as was said, is seldom the case, that which is representative in the expression, aside from the fact of its moving upward or downward, is determined by the intervals of pitch separating the beginning and the end of the inflection. In uttering the final words of the sentences, "I will go" or "I am going," the voice, on the single syllable "go" or on the two syllables "going," glides from one tone to another so rapidly that the two tones have the same general effect that they would have, were they uttered simultaneously. If, therefore, the two tones be separated by what is recognized to be an harmonic interval of the musical scale, they together produce harmony; if not, they produce discord.

Harmony and discord, as thus produced by the blending together of two tones, have an effect analogous to that of quality in a single tone, which also is produced by the blending together of certain partial tones of which it is composed. (See Chapter XIV. of "Rhythm and Harmony in Poetry and Music.") For this reason, the harmony or the discord caused by the relative intervals of pitch separating the beginning and the end of an inflection, do not express, as pitch does, the motive or aim of the utterance, but rather, as quality does, the emotive nature of the mood behind the utterance. (See page 171.)

As represented in sound, it may be said that every mood that is absolutely normal, because healthful, strong, buoyant, joyous, or unimpeded, or, to state this in a general way, every mood in which the conditions appear to the mind to be *satisfactory*, naturally tends to harmonic expression. On the contrary, every abnormal, unhealthy,

because weak, depressed, sad, or impeded mood, or every mood in which the conditions appear to the mind to be *unsatisfactory*, because leaving conceptions in a state of suspense, naturally tends to inharmonic expression. This latter is what we hear, therefore, in the moaning and crying of weakness, in the fretting and complaining of hopelessness and misery, and in any habits of tone, like the so-called "ministerial," which are produced by dwelling upon the more pathetic aspects of subjects. The impression conveyed, in all these cases, is that thought and feeling are waiting for a desired consummation that delays coming.

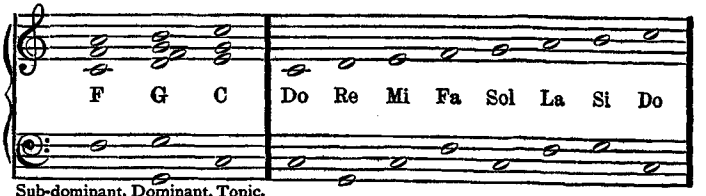
As represented in music, this inharmonic effect is expressed in what is termed the minor interval (see "Rhythm and Harmony in Poetry and Music," page 218), which, while itself not absolutely inharmonic—if it were so it could not be used as a factor of musical harmony,—is, nevertheless, suggestive of a lack of harmony; and it is this fact that accounts for the associations that all have with this interval. It is the musical adaptation of that which, in speech, represents suspense, and, therefore, the depressed and pathetic. There are other conditions, too, that distinguish the minor cadence as used in speech and in music. In music, the minor cadence is not always determined by the pitch-relations to one another of two or more final notes of a melodic phrase, but is also determined by the harmonic relations to one another of the chords, which, according to the laws of the key in which the melody is arranged, *harmonize*, as is said, the last two or more notes of a melodic phrase. Even where the chords do not actually accompany the melody, the ear, owing largely to association, seems to recognize the relationship to such chords of the tones of the melody.

With reference to the result of all this, so far as it can be explained without going into a discussion of the origin of musical scales and chords (see "Rhythm and Harmony in Poetry and Music," Chapters XIV. and XV.), it may be said that in music the satisfying effects corresponding to those of the harmonic cadence are conveyed by series of chords that resolve, as is said, into the major chord of that which, for the time being, is the keynote.

This statement may be made more clear to those not musicians by saying that in any given scale represented by the syllables *do*, *re*, *mi*, *fa*, *sol*, *la*, *si*, and *do*, the *do* is the keynote, and that the notes represented by *do*, *mi*, and *sol* are those comprising the major or principal chord of the keynote. In hearing the scale sung, we become accustomed to expect it to end after, in ascending it, we have heard *si*, and after, in descending it, we have heard *re*. Any chord, therefore, that brings in *si* or *re*, especially if either be made prominent; has a tendency to suggest that the phrase composed of the series of chords being sounded is about to be brought to a close. It so happens that both *si* and *re* are in the major or principal chord based upon *sol*. For this reason, in order to produce a thoroughly satisfying closing effect in harmony, this major chord based upon *sol*, which is called that of the *dominant*, must precede the chord based upon *do*, which is called the chord of the *tonic*. Moveover, when producing a complete harmonic musical cadence, a fourth note, in addition to the three notes constituting the major chord of the dominant, is often used, making the whole chord—naming the notes according to those in the scale of the keynote—*sol*, *si*, *re*, and *fa*. This forms the chord of the seventh, as explained on page 218 of "Rhythm

and Harmony in Poetry and Music." The reason for introducing this fourth note is because it is not in the highest sense, or perfectly, harmonious with the rest of the same chord—*i. e.*, with the combination made up of *sol*, *si*, and *re*. Its effect, therefore, is to cause the chord as a whole to seem slightly discordant. But that for which, when listening to a series of chords, the musical ear is in search, is harmony. Whenever, therefore, it does not hear this, it is forced, by a law of nature, to desire to have the movements of the chords continue till the perfectly harmonious is reached. For this reason, the chord of the seventh augments the feeling of unrest and dissatisfaction, and prepares the mind, by way of contrast, for the restful, satisfying closing effect of the major chord of the keynote when, at the next sound, the phrase is brought to a conclusion.

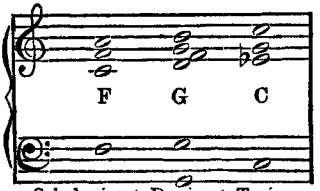
Still more to augment the same series of effects, the series of chords used in the harmonic cadence, when it is absolutely complete, starts with the chord of the *subdominant*, as it is called—*i. e.*, the major chord of the note represented by *fa* in the scale of the keynote. This chord sounds *fa*, *la*, and *do*. It is followed by the chord of the *dominant* or the *seventh*, *sol*, *si*, *re*, *fa*, and this, in turn, by the chord of the tonic, *do*, *mi*, *sol*. In the key of C major, these chords in succession would be represented thus:



No. 41.

Notice, now, that the three chords together sound every note of the scale. They are comprehensive, therefore, of all the effects possible to it; and, whenever thus sounded in succession, they not only comprehend these effects, but, in a peculiar way, blend and summarize them so as to produce a cumulative climax.

On the contrary, in the degree in which these three chords, in the order indicated, are lacking, in that degree is the cadence incomplete. Of course, it is most incomplete, or rather it is most distant from being, in any sense, a climax, when the concluding chord itself is that of the seventh, or one that suggests the combinations entering into this. Nothing, except the still more discordant chord of the ninth, which is used occasionally, can possibly be so representative of that which leaves the mind unsatisfied, because in complete suspense. Even when, in other respects, the whole cadence is complete, but the final chord is minor instead of major, the effect is still of a nature fitted to convey this impression. Notice 42.



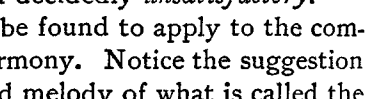
Sub-dominant. Dominant. Tonic.

No. 42.

The scientific reason for this effect is undoubtedly the fact, which will be found explained in Chapter XV. of "Rhythm and Harmony in Poetry and Music," that the notes of the major chord are the same as the most prominent partial tones which can be detected by resonators as actually entering into the composition of its fundamental bass note; whereas, the note that changes this chord to a minor is only a partial tone of one partial tone of this bass. The major, therefore, is the only chord expressive of absolute unity or, what is the same thing, of absolute harmony as applied to musical relations.

In elocution, the *harmonic* cadence in connection with the *upward* inflection represents hopeful and joyous, because absolutely *satisfactory anticipation*, or, as the case may be, indecision, subordination, insignificance, triteness, negation, or questionableness; and, on the other hand, the *inharmonic upward* cadence represents *anticipation in suspense*, *insolvable* indecision, *despairing* subordination or insignificance, negation with *no prospect* of affirmation, questioning with *no expectation* of response. According to the same analogy, the *harmonic downward* cadence represents *conclusiveness*, decision, interest, importance, affirmation, positiveness of the most *satisfactory* character possible; and the *inharmonic* cadence represents the same, but of a character decidedly *unsatisfactory*.

The same principles will be found to apply to the complete cadence in musical harmony. Notice the suggestion of satisfaction in the upward melody of what is called the "Motive of the Rhinegold," in Wagner's opera of that name (43): And the same suggestion, joined with a slight hint of something more to come, because not ending on the keynote, in the "Sword Motive" (44):



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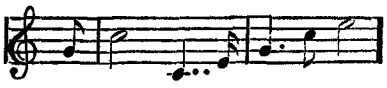
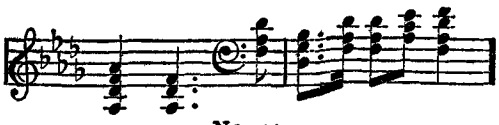
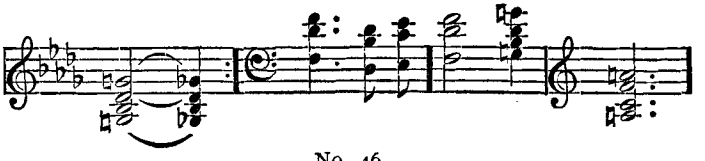

No. 44.

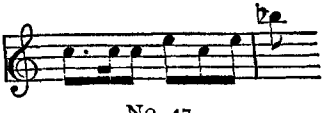
Also in the rich succession of chords, scarcely one of which need be resolved, in the "Motive of the Ring," in the same opera (45):



No. 45.

As well as in the motive of "Alberich's Triumphal Cry," resolving itself into the F major in the following (46):

No. 46.

On the contrary, notice now the unsatisfactory effect,—because of the future danger suggested—in what is called the "Motive of Menace (47) as uttered by Alberich in the same opera. Even the "Motive of the Sword's Guardian" (48), in the "Walküre," is not wholly satisfactory, in the sense that it suggests more to come:



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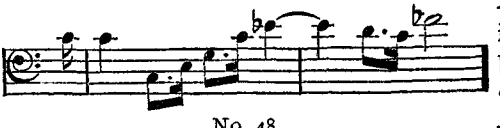
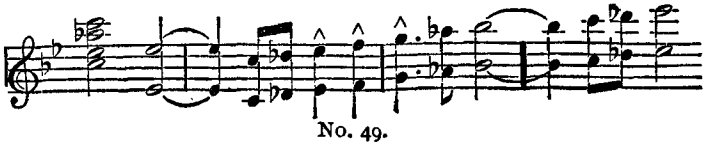
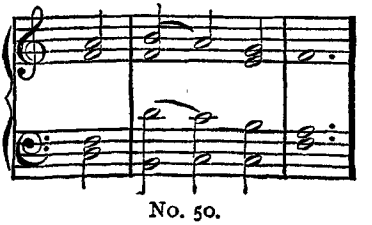
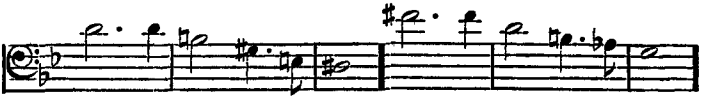

No. 48.

And the same is true of the blended effect in "Siegfried," of what is termed the "World's Heritage Motive" (49):

No. 49.

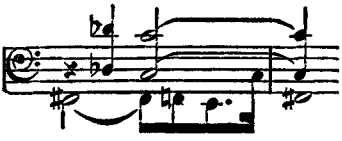
With the effect of the complete harmonic cadence in connection with the downward movement we are so familiar that it hardly needs illustrating. Here is an instance of it as applied to both melody and harmony (50):

No. 50.

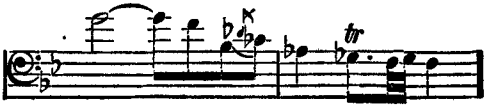
Here is one of Wagner's

downward melodies, suggesting quite an unsatisfactory conclusion. It is the "Motive of the Right of Expiation," in the "Götterdämmerung" (51):

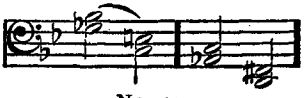


No. 51.

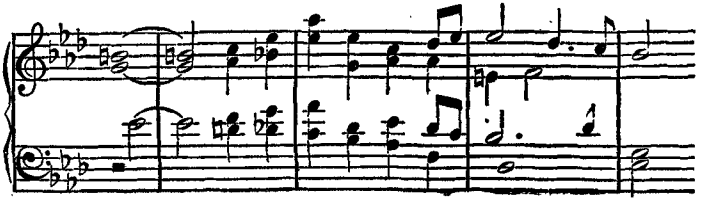
And here is the same effect in harmony in the "Motive of the Vindictive League," in the same opera (52):

No. 52.

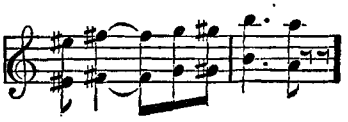
Also in the melody of the "Motive of Murder" (53):

No. 53

Another similar effect is apparent in the "Motive of Thoughtfulness," representing the crafty and anxious thought of Alberich in the "Rhinegold" (54):



No. 54.

And in this "Motive of Siegfried, the Guardian of the World's Welfare" (55), the end is suggestively unsatisfactory in the sense of indicating more that needs to be achieved:

No. 55.

Wagner seems to be exceedingly fond of ending an upward movement that is expressive, as all such movements are, of anticipation, indecision, or questioning, with a downward movement, containing a minor cadence, or, as often, an unresolved seventh. This downward movement, inasmuch as it is supposed to contain the conclusion or answer to the upward movement (see music numbered 26, 27, 28, 29, on pages 271–2), suggests, in such cases, that there is no satisfactory conclusion, decision, or answer to the feeling embodied in the preceding upward movement. Hence, the arrangement of tones represents the extreme of disappointment. Here is an instance of this effect in one of the chief motives in "Tristan und Isolde" (56). And here is the expression of Sieglinde's compassionate yearning for Siegfried in the "Walküre" (57).

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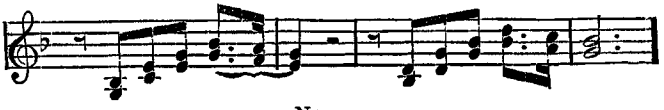
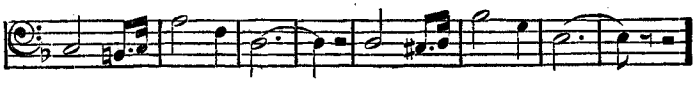
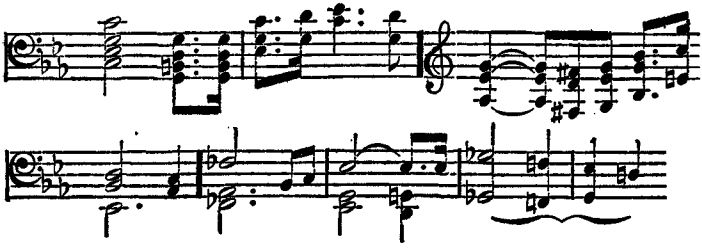
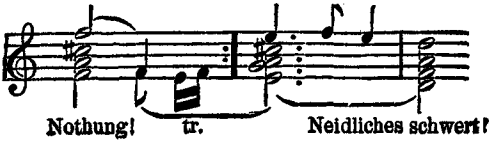


No. 57.

This is what, in the same opera, is a symbol of the "Walsungen Family in its Love and Pain" (58):

No. 58.

And this of the heroism of the same family in suffering (59):

No. 59.

And here is the "Phrase of Nothung," in the "Siegfried" (60):

No. 60.

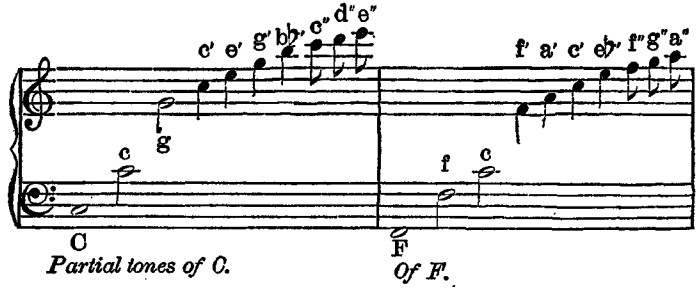
CHAPTER VI.

REPRESENTATION THROUGH MUSICAL QUALITY.

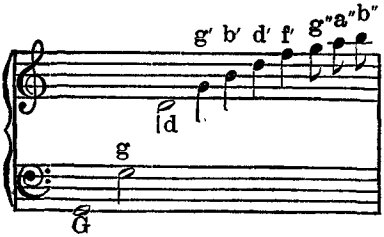
How Musical Quality is Determined—How Determined in the Human Voice—What Different Qualities of the Voice Represent—Their Correspondences in Nature—Analogies between Quality as Used in Elocution and in Music—Representation by Way of Association through the Use of Different Musical Instruments—The Same Continued—Representation through these by Way of Imitation—Other Examples.

QUALITY, timbre, or, as it is sometimes called on account of that to which it corresponds in painting, tone-color, is determined by the elements of which a tone is compounded. This is not the place in which to detail the various experiments through which this fact has been ascertained. It will suffice to say that, among other methods, through the use of resonators so constructed as to enable one to detect the presence in a tone of any particular pitch, it has been fully proved that when a string like that of a bass viol is struck, it produces a note—say that of the bass C—representing a sound-wave caused by the whole length of the string. This C is the main, or as it is termed, the *prime* tone that we hear. But, at the same time, this same string usually divides at the middle, producing what is called a partial tone of the C above the bass, caused by a wave one half the length of the string. It often produces, too, partial tones of the G above this, of the C above this, and of the E above this, caused respectively by sound-waves of one third, one fourth, and

one fifth of the length of the string. The tones of this character which, in different instruments, have been detected as entering into the composition of C, F, and G, are as follows, those nearest the bass being heard, of course, much the more prominently and commonly. This music is taken from page 248 of "The Genesis of Art-Form."



Partial tones of C. *Of F.*



Of G.

No. 61.

It is the presence of partial tones of such pitch as to form harmonics with the prime tone, that causes a sound to be musical; and it is the prominence of different partial tones in notes differently produced that causes these notes to differ in quality.

In human utterance, the possible varieties of quality are determined by the relative proportions in which noise and music—sometimes, as we might say, breath and vocalization—are combined as a result of natural or assumed shapes or actions of the vocal organs and passages. What different kinds of quality thus produced are fitted to represent, it needs but little observation to discover. It

certainly is not, as in the case of force, physical energy. When Patti passes from a loud to a soft, or from an abrupt to a smooth tone, she changes greatly the kind of energy, but her voice still retains the same Patti-quality. Nor does quality represent mere intellectuality. A man, without changing in the least an habitual nasal or wheezing quality, may give every inflection needed in order to represent the merely mental phases of the motive that actuates him. But if we frighten him severely, we may make it impossible for him to use any other sound than a whisper; if, in connection with this, we anger him, he will hiss; or, if at length he recover his voice, he will use the harsh, jarring, interrupted hard-*g* quality of tone, termed the guttural; or, if that which he would repel be too great to make anger appropriate, it may widen and stiffen his throat so as to produce the hollow, almost inarticulate indication of awe and horror given by what is termed the pectoral quality. Release him now from the influence of fright, anger, or horror, and put him into a gently satisfied mood, and he will use his nearest approach to pure quality. Stir him then to profound emotion, inspired by what is deeply satisfying, and all his vocal passages will expand again, and he will produce his nearest approach to the full, round, resonant quality termed orotund.

For these reasons, it seems indisputable that, as applied to vocal expression, quality represents feeling, temper, the spiritual condition of the higher emotive nature. This feeling, on its physical side and with its most physical coloring, gives us, first, the serpent-like hissing aspirate; next, with an intellectual coloring, the guttural quality; and last, with an emotional coloring, the pectoral. On its intellectual side, it gives us, first, with a physical coloring,

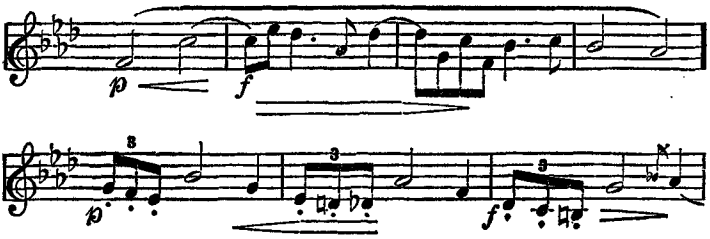
the soft whispering aspirate; next, with an intellectual coloring, the pure quality; and last, with an emotional coloring, the orotund. Of these six forms of quality, the first four are classed in a general way as impure, because there is in them more breath or noise than vocal tone or music; and the last two are classed as pure. The first three again refer to what one wishes to repel; the hissing aspirate indicating feelings like *affright*, *amazement*, *indignation* and *contempt;* the guttural, as has been said, *hostility;* the pectoral, *awe* or *horror*. The last three refer to what, if not wholly satisfactory, at least, excites in one no movement aimed against it. The soft whisper indicates feelings like *surprise*, *interest*, or *solicitude;* the tone termed distinctively the pure, represents *gentle contemplation* of what may be either joyous or sad; and the orotund, deep *delight*, *admiration*, *courage*, or *determination*, as inspired by contemplation of the noble or grand.

As in the cases of duration, force, and pitch, so all these forms of quality, too, have their correspondences in effects of nature as manifested in other departments. Applied to effects of water, for instance, a rushing stream would represent the harsh aspirate, a rocky stream the guttural, a roiled stream the pectoral, a rippling stream the gentle aspirate, a clear stream the pure, and a full, deep stream the orotund.

That analogies exist between quality as used in elocution and in music, scarcely needs to be argued. As produced by the human voice, there can be no radical differences between possibilities in speaking and in singing; and, as produced by constructed musical instruments, it is inevitable that the mind should associate with each certain representative features, and should determine them

by the resemblance, or supposed resemblance, of their artificial tones to the quality of some tone natural to the human voice, or else produced in some other way in nature. In determining these resemblances, too, one would be influenced, of course, by the uses which as a rule, are made of the particular instruments which he is hearing. It is undoubtedly owing to associations of this kind that we read of the stirring tones of the fife and drum, the solemn tones of the organ, the purity and softness of the flute, the gayety and triumph of the trumpet, the woe and complaint of the bassoon, the pathos and humaneness of the violin.

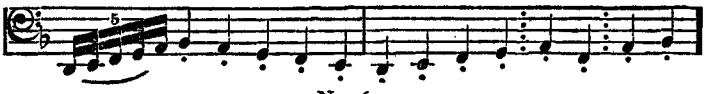
These differences between the representative qualities of different musical instruments depend partly upon what their sounds are in themselves, and partly upon the way in which they are produced—a violin, for instance, being played sometimes with a bow and sometimes with the finger. But that the differences exist, and that they are representative, is almost universally recognized by both composers and audiences. When, for instance, in listening to an opera, we hear predominantly the clash of the cymbals or rattle of the kettle-drums, associated, as these usually are, with the sharper tones of the metallic instruments, we know that the sounds, as in the last act of Mozart's "Don Juan," where hell is supposed to await the hero, represent, according to the degrees of their intensity, not only the startling, but the hostile and menacing effects which, in the human voice, we associate with guttural quality. If any action of the play must follow what we hear, we expect to see some violent conflict full of malignity and peril. When the predominating sounds are those of the bass drums and the lower, more hollow tones of either the wind or the stringed instruments, we

know that, as in the orchestration which in Wagner's "Siegfried" accompanies the hero's encounter with the dragon, they represent the presence of that which inspires to awe and horror such as, in the human voice, we associate with the pectoral quality. The resemblance to this tone in its milder forms is undoubtedly that which imparts a solemn effect to the music of the church organ. When, again, the predominating sounds are those of the wood instruments—the clarinet, the flute, even, to some extent, the organ—we feel that these represent the gentle, passive contemplation, sad or joyous, which, in elocution, is indicated by pure quality. We can confirm this by recalling the effects of the Shepherd music in Rossini's "William Tell," or in Wagner's "Tristan und Isolde," *e. g.*:

No. 62.

When, instead of the wooden wind instruments, we hear the metallic, either as in the organ or in trumpets and instruments of similar character, we feel that these represent the more profound emotions, the admiration, enthusiasm, courage, determination, that we are accustomed to associate with elocutionary orotund quality. To such music we expect to see troops march on to the stage, as in the Soldiers' Chorus in Gounod's "Faust," giving vent to their confidence in anticipation of victory, or to their

joy in view of its accomplishment. Once more, when we hear the stringed instruments we recognize that it is their peculiar function to impart intensity of feeling, just as is true of the elocutionary aspirated quality. Hence, the reason for the use of the violins in that scene in Wagner's "Meistersinger" which takes place in the house of Hans Sachs; or in the Venus music of his "Tannhaüser"; or in the waltz music of Gounod's "Faust." Just as in the case of the elocutionary aspirate, too, so here the effects of these stringed instruments may partake of those of any of the other instruments. Not only when associated, as in orchestral music, with the instruments that have been mentioned, but even when not associated with these, the sharper tones of the strings suggest the aspirated guttural, their lower hollow tones the aspirated pectoral, their struck tones, as in the piano, the guitar, and the harp, the aspirated pure, and their tones as produced by the bow, the aspirated orotund.

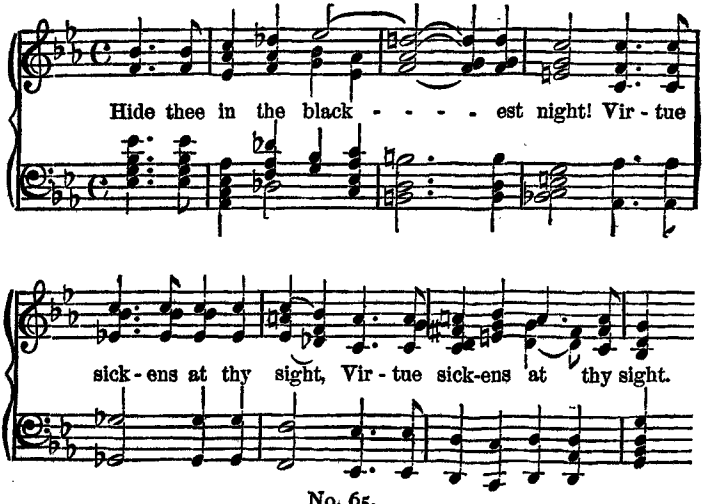
After what has been said, it is scarcely necessary to add that, as in the cases of duration, force, and pitch, all of these suggestions of quality may be produced not only indirectly by way of association, but directly also, by way of comparison, or, in other words, through effects purely *imitative*. All of us have heard representations of battles and thunder-storms made such through using drums and cymbals, of birds through using flutes, and of sleigh-rides through the tinkling of bells and the cracking of whips. But, possibly, we do not all realize that such forms of imitation are not confined, as is sometimes supposed, to works of a low order of merit. For instance, in Wagner's "Walküre," to quote from Hans von Wolzogen: "The wind blows, the thunder rolls, lightning flashes in the rising and falling sway of the orchestra and the stroke

of the weather-god's hammer in the 'Motive of the Storm'" (63).

No. 63.

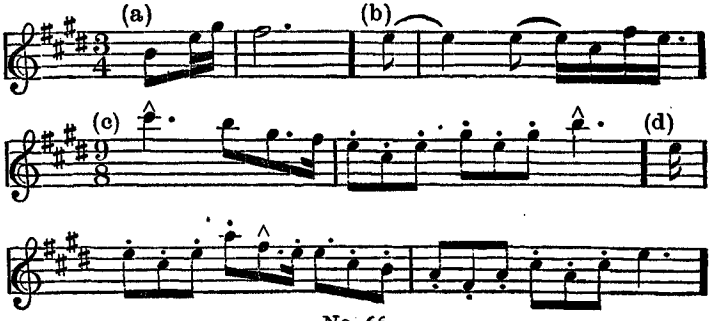
Notice, too, the following from "O ruddier than a cherry," in Handel's "Galatea," as given in Gurney's "Power of Sound" Chapter XX.:

No. 64.

Also, as given in the same, this distinctively pectoral effect from Handel's "Envy, eldest born of hell" (65):



No. 65.

So, too, in the works of Hadyn, there are many passages evidently intended to be imitative in quality, noticeably in the accompaniments of his oratorios, as, for instance, in the representation, through the use of the bassoons, of the tread of the elephant accompanying, in "The Creation," the words, "By heavy beasts the ground is trod"; and of thunder through the use of drums accompanying those in "Judah," "The rolling thunder He cast on all"; and also the roaring of a storm in the chorus in the same oratorio, "The Lord devoureth them all." Recall, too, the use of pure quality in the representation of the song of the bird in Wagner's "Siegfried" (66):

No. 66,

There is no doubt, too, that the effects produced by the violins in the forest music preceding this song of the bird, as well as in the pastoral symphonies of Handel and of Beethoven, are intended to imitate, as heard in the warmth of a summer's day and stirred by a gentle breeze, the rustling of leaves and the buzz and soft hum of insects; in fact, the same as is imitated in another art by Tennyson, when in "The Princess," he speaks of

> "The moan of doves in immemorial elms,
> And murmuring of innumerable bees."

So, also, the distinctive qualities of the human voice are sometimes imitated. What could illustrate this fact better than the Wailing Chorus, or the song about "Troubled Sleep" in Sullivan's "Iolanthe"?

CHAPTER VII.

MUSICAL REPRESENTATION IN SERIES OF PASSAGES WHEN NOT IMITATIVE.

Series of Passages as Representative—By Way of Association as in Discoursive Elocution—As Illustrated by Haweis—By J. D. Rogers—Schumann's "In der Nacht"—Brahme's German Requiem—B. I. Gilman's Experiment—Explanation—Recorded Result—Deduction to be Drawn from these Quotations: In what Sense they Indicate that Music is Representative—Quotation from J. S. Dwight Interpreting the most Important of the Forms of Musical Composition—Program Music—Its Appropriate Use.

AS suggested by many of the examples of music contained in Chapter VI., as well as by others preceding them, it cannot fail to be observed that almost all forms of musical representation, whether associative or imitative, involve the use not of one element alone, be it duration, force, pitch, or quality, but of a combination of all four. Indeed, even when single phrases are representative in only a single element, it is impossible to blend them with others preceding or following them without suggesting representation in all the elements. This fact renders it necessary, before our discussion is complete, to consider the representative character of music as manifested not only in single phrases but in series of them.

Following the same order of thought that has been pursued hitherto, let us consider the development of series of phrases in accordance, first, with the methods analogous to those giving instinctive and ejaculatory ex-

pression to internal moods by way of association, in what was termed in Chapter II. discoursive elocution, and second, with the methods analogous to those giving reflective and imitative reproductions of audible effects of nature, in what was termed dramatic elocution.

Perhaps there could be no better way of illustrating how series of representative phrases can be made to represent series of consecutive emotions, in accordance with the analogies of discoursive elocution, as these have been explained under each head of duration, force, pitch, and quality, than by introducing here a quotation from the "Music and Morals" of H. R. Haweis. It will be noticed that each of these elements is mentioned by him, though in a different order from that in which they have been treated here. The quotation is all the more apt, too, inasmuch as, in the place in which it is found, it is not directly intended to sustain the principles now under consideration.

"(1) Elation and Depression. When a man is suffering intense thirst in a sandy desert, the emotional font within him is at a low ebb [this is represented by low pitch]; but on catching sight of a pool of water not far off, he instantly becomes highly elated, and forgetting his fatigue, he hastens forward upon a new plane of feeling [high pitch]. On arriving at the water he finds it too salt to drink, and his emotion, from the highest elation, sinks at once to the deepest depression [very low pitch]. (2) Velocity"—what has here been termed time—. "At this crisis our traveller sees a man with a water-skin coming toward him, and his hopes instantly rise [high pitch], and running up to him he relates how his hopes have been suddenly raised and as suddenly cast down [high and low pitch again]; but long before he has expressed or even begun to express his meaning, he has, in a moment of time, in fact, spontaneously, with the utmost mental velocity, repassed through the emotions of elation and depression which may at first have lasted some time, but are now traversed in one sudden flash of reflex consciousness. (3) Intensity"—what has here been termed force—. "As he drinks the sparkling water, we may safely affirm that his emotion increases in intensity up to the point where his thirst becomes quenched, and that every

drop that he takes after that is accompanied by less and less pungent or intense feeling. (4) Variety"—including also what has here been termed quality.—"Up to this time, his emotion has been comparatively simple; but a suffering companion now arrives, and as he hands to him the grateful cup his emotion becomes complex, that is to say, he experiences a variety of emotions simultaneously. First, the emotion of contentment at having quenched his own thirst; second, gratitude to the man who supplied him with water; . . . third, joy at seeing his friend participating in his own relief. (5) Form. If the reader will now glance over this simple narrative . . . he will see that both the simple and the complex emotions above described have what, for want of a better term, we may call form; *i. e.*, they succeed each other in one order rather than in another, and are at length combined with a definite purpose in certain fixed proportions."

A similar conception with reference to the general analogy of series of musical effects to series of events, as we are accustomed to see them unfold not in one but in many different departments of nature, is brought out in the Appendix II. of Bernard Bosanquet's "History of Æsthetic." The author says:

"The following notes have been furnished me by Mr. J. D. Rogers. . . . They appear admirably to illustrate the conception of music, as the spirit of actions and events, suggested by Plato and Aristotle, and in modern times popularized by Schopenhauer:

"1. Schumann's 'In der Nacht' used to summon up before my imagination the picture of the moon struggling through the clouds on a windy night—emerging and disappearing by turns; then for a while reigning 'apparent queen' amid white fleecy clouds, which are not sufficient to intercept its light. During two moments even this silken veil is withdrawn, only to be succeeded by a bank of black clouds, for a long time impenetrable, at last penetrated at intervals a little more irregular and with a brightness a little wilder and more meteoric than before; finally—the light is put out and quenched by the storm.

"I learnt some years afterward that Schumann also associated this piece with a picture, the idea of which occurred to him after he had written the entire set of 'Fantasiestücke' to which it belongs. It was a picture portraying the story of Hero and Leander; his picture is not incompatible with mine. In his, the clouds correspond to the waves, the moon to a swimmer, buried and stifled in their troughs or flashing and calling out from their

crests. Where the moon triumphs in my story, in his there is a love scene on the shore, accompanied by the distant rippling of waves; it seems almost as though

> "'The billows of cloud that around thee roll
> Shall sleep in the light of a wondrous day.'

"But no; there comes the plunge back into waves blacker than before—tossings to and fro—cries from the swimmer and from the shore—and, finally, 'night wraps up everything.' The music can be rendered after the manner of Max Müller, either into a Lunar myth or into a Greek legend. What the moon does, and what the Greek hero did in the story, are to a great extent the same; and music interprets that important element or attribute which is common to both.

"2. If music seizes hold of the spirit or soul of any event or series of events, has, it may be asked, any composer attempted to represent God—God in the sense in which the word is used in the common phrase, 'God in history,' or in which God is described in Tennyson's 'Higher Pantheism,' or Wordsworth's 'Tintern Abbey'? I reply by an instance, Brahms's German requiem has often been praised for the rich elaboration of its detail, its blending of the antique and modern, its contrapuntal devices fused in the crucible of romanticism. But it has yet finer and deeper merits. The solemn opening, 'Blessed are they that mourn,' is set to the same music as the solemn close, 'Blessed are the dead.' In the middle of the piece the name of God is introduced for the first, and almost the last time, to the words, 'The souls of the righteous are in God's hand.' That name is translated into music by the pedal note, which is held down from beginning to end of the fugue in which these words are set. The pedal note persists, makes its presence felt throughout, is all-enduring, all-pervading; the fugue starts from it, and finally, after many intricate wanderings, returns to it; it is the fundamental note—the foundation of the first and last chords, and, although many different, and apparently incompatible, harmonies are found in the course of the fugue, these harmonies are all finally resolved into the initial harmony, of which that pedal note is at once the characteristic note and the epitome. Everything proceeds from it and returns to it; it alone is permanent, and steadily, continuously, irresistibly self-asserting. Neither poetry nor painting nor architecture can express mysteries such as these with such searching force and directness."

A still more important contribution to this subject, justifying, according to a scientific method, these views of the representative character of the effects of music, is

made by Mr. Benjamin Ives Gilman, in an article upon "Musical Expressiveness," published in the "American Journal of Psychology," and also in "Werner's Magazine" for May, 1893. Mr. Gilman states that, in answer to an invitation extended by him, about thirty persons assembled in a parlor at Cambridge, Mass., their object being to test by experiment "the power of music to awaken definite ideas and emotions in the listener." What follows is given in his own language.

"The instruments used were a grand piano and the violin. The interpretation of the program was intrusted to three well-known musicians, Mr. Charles L. Capen, Miss E. M. Yerrington, piano, and Mr. A. Van Raalte, violin. The whole company, performers and audience, began the evening in a very skeptical frame of mind regarding not only the value of any data which might be obtained, but even the possibility of carrying out such a test. The result belied our forebodings. The method of inquiry proved a practicable one, and there was, I think, a general feeling of surprise among the listeners at the amount of booty rewarding their determined efforts to capture the suggestions of the music played. It was expected that several musicians by profession would be among their number, but as it turned out the audience consisted entirely of amateurs. A large minority, if not a majority of these were without special skill on any instrument; a few were distinctly non-musical in the sense of having no marked endowment of musical ear or memory; but there were none present, I think, who were not capable, at least at times, of enjoying and feeling music deeply. The work of the evening consisted in obtaining answers to fourteen questions based upon thirteen selections of music, one being the subject of two questions. Nearly all of the pieces were played more than once, some of them several times, and although they succeeded each other almost without intermission, except for putting the questions, and making necessary explanations, the experiment lasted without any relaxation in the interest of the participants from eight o'clock until midnight. Twenty-eight note-books were the result, sixteen contributed by gentlemen and twelve by ladies."

The reader will get a general conception of the result of these experiments from two questions, together with the answers to them, which, on account of their importance, will be given in full. The gentlemen's answers from

A. to P. are given first; the ladies from *A.* to *L.* follow these.

QUESTION I.

Give any image that is strikingly suggested to your mind by the course of the following piece.—Beethoven, "Piano-forte Prelude in F. Minor." It bears no opus number, but in the Brietkopf & Haertel edition of Beethoven's works is No. 195 in Series 18, "Kleinere Stücke für das Piano-forte." Piano solo.

To the writer its character is that of an unending contest with an opposition that bars every advance. It is an attempt to hew a way through adamant. We could fancy ourselves listening to the tireless dialectic of a mediæval schoolman on some transcendental thesis, or even admitted to the mind of a melancholiac eternally resenting miseries eternally visited upon him afresh. Dry and gloomy energy doing doughty deeds to no purpose is to me the burden of the piece.

Answers to I.

A. The swaying of the treetops in a moderate wind; weird songs are sung beneath the trees.

B. A country church appeared to me; the music formed the chimes: the surrounding scenes were grave or gay as the music became slow and soft or fast and loud. As it died away a funeral train seemed passing.

C. No image. Technique (not of performance but of composition) entirely covers up the æsthetic effect. I cannot help being lost in the sequence of the strain, especially on an instrument of percussion like the piano.

D. At first, organist seated at an organ in church, then a change at end to twilight; a large hall; a man who has felt sorrow, yet feels the grandeur of life above all, improvises; a love sadness.

E. Plunge of a torrent in the woods; then children's feet dancing as the key changes; sunburst. Thenceforward the piece gets more dramatic, forming a sort of tumultuous dialogue or inward dilemma of affirmation and negation. It rolls on to some practical moral decision, and with moments of peace or weary diversion it ends in a sort of forgetting calm without particular triumph.

F. A hymn of thankfulness.

H. Persistent struggle with rather mild difficulty, *e. g.*, walking through a wood with thick underbrush.

I. Chime of church bells; bright, sunny morning; gathering to church; in church; entry of minister; hushed; minister rises; ready for service; last stroke of chimes.

J. The rolling up of breaker after breaker on the beach with the sound of more distant rollers in the lulls; or the dying away of a storm.

K. This is a fugue. Fugues always suggest to me the beauty of organism, the universal not being built out of an accretion of particulars but revealing itself in subtle relations among them; the complexity of law; the essentialness of sadness to happiness.

L. A great strife against something; a final conquering of this something, and then rest. This strife seems to return at times and is then quieted; finally, near the end a burst of it, and then the quiet closing bars.

M. Suggests a life toiling on through disappointment and struggle, until at last peace comes, a peace of which there had been moments of anticipation. Not a brilliant idea nor a prominent life.

N. The resolute self-possession of the process that, going on, suggests at once something very much alive, very free—a nature-force in full possession of its own world: "*Sie entlasst sich frei, ihrer selbst ganz sicher*," says Hegel of the *Idee*, when it passes over into *Natur*. I have a sense that a water-process would be the scene most naturally suggested. Scene, however, not complete, but waves on water most probable.

O. A rather distinct idea of a workman making something by strokes, as a smith. There is also a feeling that he is in a lazy mood, as if the afternoon sun was streaming in. The work is pleasant.

P. Church; opening voluntary. Religious cheerfulness. A religious dance; measured movement of hands. Or, somewhat, a brook tumbling along over a stony bed. The suggestion of a yearning.

A. (Bach). A ship approaching end of voyage: all tension: haven.

C. It (the piece) seemed to me to embody the progress of a mountain stream on its course from the hills to the plain, flowing among rocks over many obstacles, under the forest trees, with the quiet and deep repose of the wild wood pervading all. This was the only image that occurred to me. The intensity of the stillness of the wood was most prominent.

D. Persistent effort, resulting in serene progress.

E. A perpetually struggling bird, flying up and beaten back by the wind.

F. Beating of the waves upon the rocks in the receding tide.

G. Storm wind; agitated sea; dashing on rocks or through pines; increasing, then gradually subsiding. A rock-bound coast with weather-beaten woods, mostly pines.

Spiritual vision; strong emotion; unrest; gradual peace, though not joy.

H. The last part makes upon me the impression of a scene of farewell, and I seem to see the departing friend disappear beyond a hill.

I. Dark clouds; storm. An old German church with suggestion at the close of a funeral sermon over some great and heroic character. A feeling throughout as of a strong resounding sea against a frowning coast.

J. A controversy or argument between a man and a woman, ending with great peace.

K. The incoming tide dashing on the rocks, with intervals of quiet ebb.

L. Church music; offertoire; also organ playing while waiting for a wedding party; cheerful, and not too joyful; serene; also the suggestion of hearing the organ playing inside, while outside, in the summer. (Bach.)

QUESTION V.

How would you describe the general mood which the following music is fitted to incite, or the atmosphere which seems to pervade it?—Beethoven, "Piano-forte Sonata in E," op. 109. Andante molto cantabile. The theme alone without the variations. Piano solo.

It suggests to me a mood of devotional meditation (*Andacht*).

Answers to V.

A. I am still too much under the influence of No. IV. to be affected by this number.

B. Doubt; hesitation.

C. Resignation.

D. Peaceful, but sadness in it.

E. Pensive, not passionate, and grave; not regretful. Nothing more determined.

F. Prayer.

G. Proceeds from a placid mood in the presence of the sublime.

H. Religious.

I. Devotional scene; not very religious, but dignified.

J. Seriousness, solemnity, thoughtfulness, religious feeling.

K. Reverent, joyful worship.

Strasburg Cathedral; a procession passing along the nave; a choir-boy swinging a censer turns his face and looks at the spectator.

L. Somewhat religious, though it has a shade of vague unrest in it.

M. Religious, suggests some German church music.

N. No impression worth noting beyond a general atmosphere as of a

calm introduction to a dignified ceremony (?). This interpretation seems doubtful.

O. Not sure—thought still about the former piece. Is it religious peace and resignation?

P. Tender seriousness.

A. Religious expansion; grateful worship of a full, free heart.

B. Seriousness of life.

C. Tender religious melancholy tinged with a sense of pathetic pleasure.

D. Placid retrospect.

E. Known. A mood of comfort and endurance born from sorrow.

F. Retrospection.

G. Devotional; religious.

H. Longing after a higher life.

I. *Hoch, heilig und hehr.*

J. A generous and complete nature.

K. Self-control and the quiet, happy feeling that follows success.

L. A restless person waiting for some tardy arrival, trying to forget himself in writing out some serious music."

It is evident that music may be representative in the ways indicated in each of the quotations from these three writers without being in any distinctive sense imitative. All that is necessary is that its successive phases should follow a general order similar to that to which we have become accustomed in certain series of sounds or sights in nature. We have noticed, perhaps, a quiet rill developed into a cataract, and this again into a quiet pool; or a clear sky developed into a storm and this again into a clear sky; or peace developed into war and this again into peace; and one or the other of these series of phenomena is suggested to us when we hear a series of musical effects developed in what appears to be a similar order. The reason why these or any other phenomena are suggested is because of the principle of correspondence, which, as has been said, underlies all methods of expression, especially those exemplified in discoursive elocution. Accord-

ing to this principle, it is instinctively felt, even when not consciously thought, that different phases of invisible and inaudible moods follow one another in analogy to phases of a visible or an audible character.

With this general understanding of the nature of musical representation when not imitative, we shall be prepared to recognize the essential truth of the following description and interpretation of the most prominent of the forms of musical composition. The passage is taken from an article entitled, "The Intellectual Influence of Music," contributed by J. S. Dwight, formerly editor of the "Journal of Music" to "The Atlantic Monthly" for 1870.

"Look at the *Symphony*, or what is technically called the *Sonata* form, common to sonatas, symphonies, trios, stringed quartettes, classical concertos, etc. This form, too, we say, is not mere accident . . . the reason of it is to be sought in the nature of the human soul and in the corresponding nature of music.

"How is it with us when a matter interests us and excites us to that pitch of feeling in which music steps in as the natural language? Our whole nature is engaged in it. The head, or thinking principle; the heart, or feeling, loving principle; the will, or active principle; and more or less (amid these earnest powers) the lively, recreative play of fancy,—all take part in it, all in turn are principally addressed by it. Reason, passion, frolic, humor, will; these seek each its type and representative in the forms of an art so perfectly human and so pliant to the motions of the human soul as music. If a matter taxes our reasoning, truth-seeking faculties for one spell, it is a law of our nature that we then quit thinking and only *feel* about it for another spell. We modulate out of the dialectic into the religious and accepting mood. It *was* an argument, an emulous labor of the brain; it has become a lyric of the heart, a prayer, a hymn, a softly rising incense and aroma of the faith and love and longing in us. And then, the more we have been in earnest, the more naturally comes the reaction of frolic fantasy, and humor, the more lively the suggestions and 'heat-lightnings' of a quick, surcharged, midsummer fancy,—the *scherzo* humors that so often flash from characters of deepest pathos. But the circle of moods is not yet complete. Thought, feeling, fancy, are but phases of the living stream that yet must ultimate itself in action, must rush into *deed*, and so pour its life into the

great ocean whence all proceed and to which all tend. That is the finale. Now for the musical correspondence.

"The first, or allegro movement of a symphony, takes up a theme, or themes, and proceeds to their discussion and elaboration. It begins with a principal *theme* or subject; presently, with the natural modulation into the dominant or relative key, comes in a *counter theme;* these two are developed and contrasted a little way, when the whole passage is literally repeated to fix them firmly in the mind. Then begins a sort of analytic canvassing of all that they contain; fragments, phrases of the one are blended with or off-set against the other; the two propositions (often making up a number of accessory subjects by the way) are subjected to a sort of exhaustive musical logic, till what is in them is brought fully out and verified. By a sort of refining, differentiating, intellectual argumentation, these themes are held up in various lights, are developed singly and in contrast, and are worked through various keys, abridgments, augmentations, episodes, digressions, into a most various and complex whole, in which the same original threads or themes continually reappear, yet with perpetual sense of novelty. The intellectual principle delights in analysis, in the detection of differences and distinctions. So the symphonic allegro betrays a tendency to continual divergence and escape from the first starting-point. There is an art-type of discussion, whose whole aim and tendency is unity and truth. What a type of catholicity in thought! Discussion, no denial; music is incapable of that; Mephistopheles in music must make sad work or forget his nature.

"Then comes the *adagio*, *larghetto*, *andante*,—some slow movement, which has more calm, still feeling and unquestioning religion in it. This is the central sanctuary in this musical abridgment of man's life, which every good symphony appears to be. This the heart; that the head.

"The serious *andante* passes,—sometimes directly, sometimes through the frolic *scherzo*, and the *minuet* and *trio*,—into the *rondo finale*, which is rapid and full of the spirit and preparation for action, full of resolve and fire. The sentiment which has passed through the crucible of the judgment in the *allegro*, and sought its divine repose at the religious altar of feeling in the *adagio*, having traversed its intellectual and its effective phases, now puts on its armor and moves on with alacrity for action. (Though, in many lighter symphonies, it is more like a school-boy pulling on his hat and rushing out of doors in pure animal spirits.) It seems to act itself out with buoyant confidence; sometimes with sublime triumph, as in the march concluding the C Minor Symphony."

Before closing this chapter, a few words may be in place with reference to what is termed program music.

By this is meant a symphony or shorter composition in connection with the performance of which there is distributed among the audience a printed explanation of the scenes or events, or series of them, to which the movements of the music are supposed to be analogous. Many object to such explaining of musical effects. But from what has been said, it is evident that definite scenes not only may be, but probably are, conceived by the composer when engaged in his work; and it is only natural to suppose, as Liszt did, that to let one's audiences know what these were, will add to the interest of the music, just as a printed description may add to the interest, for instance, of an historical painting. We may even go so far, too, as to suppose that such a description may add to the distinctively æsthetic interest. According to the theory advanced in Chapters X. to XV. of "Art in Theory," especially on page 160, the degree of beauty is often increased in the degree in which the number of effects entering into its generally complex nature is increased. This is true even though some of these effects, as in the case of forms conjured before the imagination by a verbal description, may come from a source which, considered in itself, is not æsthetic. It must not be overlooked, however, that all beauty whatever is a characteristic of form; and that intellectual effects, like these explanations, to have an æsthetic influence, must always be presented to apprehension in connection with an external form with which they can be clearly associated. For this reason, though they may add to the æsthetic interest, where it already exists, they cannot, of themselves, make up for a lack of it. To a work of art an explanation is much what canes are to walking. Well used, they may increase the gracefulness of impression conveyed by a man's gait. But this cannot

be graceful at all, unless he is able to walk without them. So a picture cannot be all that a work of art should be, unless, without one's knowing what the explanation is designed to impart, the drawing and coloring can, in some degree, at least, attract and satisfy æsthetic interest. Neither can a musical composition, unless it too, without the aid of explanations, through the mere unfolding of musical motives in a distinctively musical way, can afford, at least, some degree of æsthetic delight.

So far as an explanation is intended to be used as a crutch instead of a cane, the opponents of program music are justified. But, on the other hand, so long as a composer refrains from conditioning upon his printed description such effects as are not legitimate to it, there seems to be no good reason why he should not share his confidences with his audiences, and let them know what visible phenomena seemed represented by his product when he was preparing it. In pursuing this course, why is he not acting as strictly in accordance with the principles of his art, as is the composer of an opera when he indicates to his stage managers how to represent the movements of his music through still more visible scenery and action?

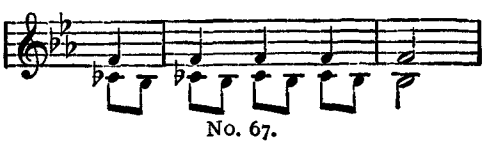
CHAPTER VIII.

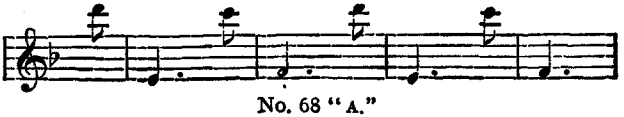
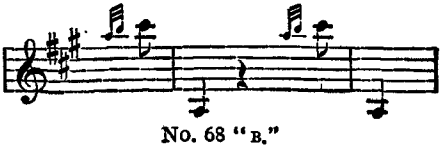
MUSICAL REPRESENTATION IN SERIES OF PASSAGES WHEN IMITATIVE, WITH REMARKS ABOUT WAGNER.

Influence upon Representation of Slight Imitative Effects—Examples: Barking of a Dog—Braying of an Ass—Nightingale's Song—Cackling of a Hen—Cluck of Same—Human Sounds—Laughter—Yawning—Sneezing—Coughing—Quarrelling—Sobbing—Scolding—Moaning—Fondling—Playing—Frightening Others—Paganini's Testimony—The General Character of Wagner's Motives—His Peculiar Method of Using them—Result of this, Especially upon those not Previously Appreciating Music—His Tendency toward a Language of Music—Will Others Develop this—Two Methods in which it may be Done with Safety—Conclusion.

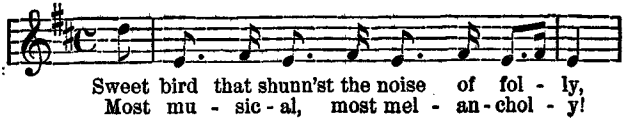
IT is evident that the analogies indicated in Chapter VII. between the general order of series of sounds and the order of particular phases of nature that they are intended to suggest, can be rendered much more distinctly apprehensible by adding to what is only generally representative by way of analogy that which is specifically so by way of *imitation.* It would need but a few imitative strokes of a drum, for instance, to make that which might suggest either a storm or a battle, suggest one of these rather than the other. In this regard, musical forms correspond exactly to poetic forms. Some words are representative because they suggest a similarity in underlying causes—like the word *expressive*, derived as it is, from analogies between pressing one material substance out of another material substance, and doing something similar

with a purely mental substance. Other words are representative because they suggest a similarity in apparent effects—like the imitative words "buzz" or "crackle." The same is true, too, of phrases and sentences. Some are artistic because they recall an analagous series of relationships, and some because they also recall an analagous series of sounds.

We have noticed already, as applied to music, how not only associative but imitative effects may be produced by a main use of each of the different elements of duration, force, pitch, and quality. Here are a few more examples produced by a combination of these. It is not necessary to say that they have the same general relation to musical effects that descriptive passages have to those of poetry. The following imitations are noticed by Gardiner in his "Music of Nature." Here is a representation of the barking of a dog by Haydn in his "Thirty-eighth Quartet":

No. 67.

Here one of the bray of the ass by the same composer in his "Seventy-sixth Quartet":

No. 68 "A."

No. 68 "B."

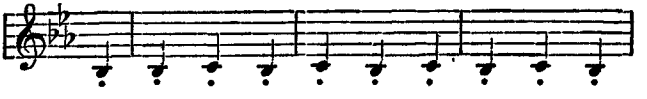
In this he represents the song of the nightingale;

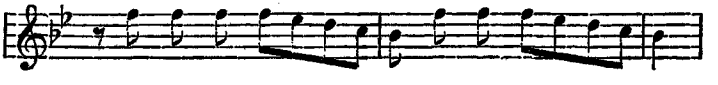


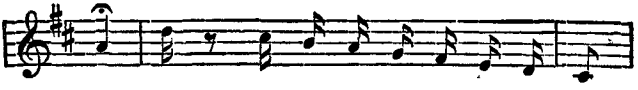
No. 69.

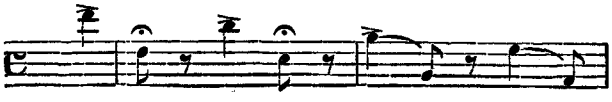
And in this, from the Finale of his "Twentieth Quartet," the cackling of a hen:

No. 70.

The cluck of the hen (imitated also by Mozart and Rossini) is thus given by Beethoven in his "Third Symphony":

No. 71.

Imitation in music, however, is confined largely to representing tones natural to the human voice. The authority last quoted notices the following:
Of laughter, by Handel,

No. 72.

by Weber,

No. 73.

Of yawning, by Haydn in his "Fifty-seventh Quartet":

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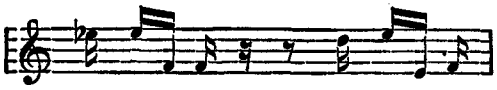
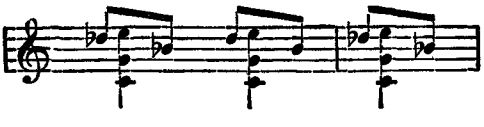
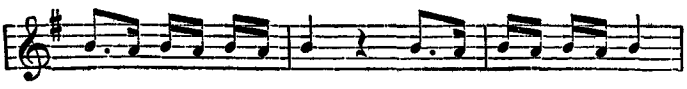

No. 75.

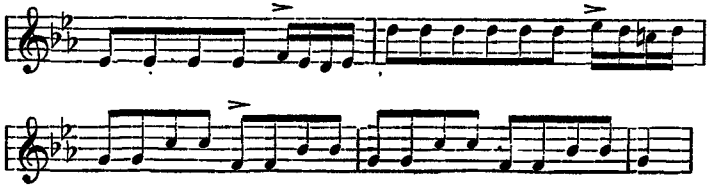
Of sneezing, by the same in his "Eighth Symphony."

No. 76.

Of a cough, by the same.

No. 77.

Of three persons in a passion, by Beethoven in his "Third Trio."

Of the sobbing of a child, by Rossini in a duet in "Gazza Ladra":

No. 78.

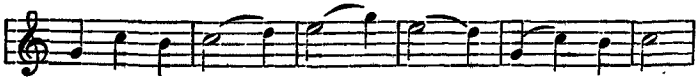
Of the scolding of a woman in the overture by Mozart to the "Magic Flute":

No. 79.

Of the moan of sorrow and pain, by Beethoven in his "Third Trio":

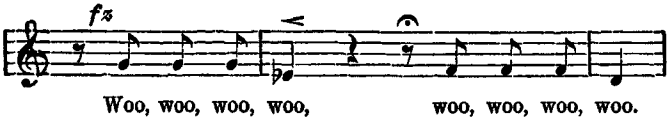
No. 80.

Of the tone of a mother fondling her child in Haydn's "Fifty-eighth Quartet":

No. 81.

Of the sounds of children at play in Mozart's "Fifth Quintet":

No. 82.

Of children frightening one another, in the opening of Beethoven's "Symphony in C Minor." Concerning this strain, Beethoven is said to have remarked, "It is thus that fate knocks at the gate":



No. 83.

Very likely some of the above appearances of imitation are merely coincidences. Others, perhaps, are strains that had been heard by the composer and retained in memory, and were afterward used without any definite notion of the source from which they were derived. Yet there can be no doubt that many of them furnish illustrations of conscious imitation. Notice what Paganini says about one of his performances. His words are quoted as given by Gardiner in his "Music of Nature," Chapter XI.:

"I accordingly gave notice at court that I should bring forward a musical novelty under the title of a Love Scene . . I . . . previously robbed it [his violin] of the two middle strings, so that none but the F and G remained; the first string being designed to play the maiden's part and the lowest the youth's. I began with a series of dialogue in which I attempted to introduce movements analogous to transient bickerings and reconciliations between the lovers. Now the strings growled and then sighed, and anon lisped, hesitated, joked, and joyed, till at last they sported with merry jubilee. Shortly, both souls joined once more in harmony, and the appeased lovers quarreled to a *pas de deaux* which terminated in a brilliant Coda."

Wagner's themes, or motives, as they are termed, and his uses of them were so unique in character as to deserve special mention. As indicated by the selections from

his works inserted in previous chapters, many of these themes were based upon the principle of imitation. But many more, as has been shown, were based upon that of expression according to the methods of discoursive rather than dramatic elocution. Whether he himself was thoroughly conscious to what an extent this was true is uncertain, though it is hardly conceivable that one who had made so exhaustive a study of the effects of sound, should not have had some definite theories with reference to their significance. Most musicians, however, though quick to detect the appropriateness of different movements for different sentiments, have difficulty in explaining the reasons for their preferences; and it may have been the same with him. But if so, it is a remarkable proof of the accuracy of his musical instincts that, without guidance of the reason, he should have made so few mistakes, as judged from even the point of view of the elocutionist.

While there is this to commend his motives, however, it is not these in themselves so much as the way in which he introduced and combined them, that distinguishes his musical effects from those of other composers. His method was first to associate a motive with some person, object, action, or event; and afterward, whenever that with which it was associated appeared upon the stage or was suggested by the language, thought, feelings, or situations, the motive itself was introduced into either the melody of the voice or the harmony of the instrumentation. Not only so, but a certain correspondence was musically indicated between the way in which this was introduced and the relations of the person, object, action, or event to the circumstances attendant upon its introduction.

This method, to those who have familiarized them-

selves with the motives, causes an opera of Wagner to have a double effect: first, the ordinary musical effect which is due to the development of the melodies and harmonies for their own sakes; and, second, the intellectual effect which is due to connecting each of these motives with that which it suggests, and noticing the way in which it blends with other motives or opposes them. This action on an extended scale, of motive upon motive, is what Wagner meant by dramatic music, and it is in the development of this that he chiefly manifested his originality. It is owing to it, too, that he has obtained such a hold upon his admirers. His method of adapting music to the requirements of intellect necesssarily adds to it an intellectual interest. In fact, after making all due allowance for those who applaud and apparently enjoy his music for the same reason that they applaud and apparently enjoy anything which is understood to be fashionable, there are certainly many people formerly unable to appreciate anything musical, who have learned to perceive in his works that which they can appreciate, and who, by first coming to take delight in music as developed by him, have come to take an otherwise, for them, impossible interest in all its legitimate forms. Through effects thus exerted Wagner greatly dignified the art to which he devoted himself, as well as extended the sphere of its influence.

But notice that the circumstance which enabled him to do this was the fact that with him series of notes are brought together in exact analogy to the way in which the much briefer series of syllables or words are brought together in speech. To a certain extent, it might be said, therefore, that what Wagner did was to construct a language of which the factors were not words but motives. It is conceivable, of course, that other musical composers

in the future will accept the meanings assigned by him to these motives, and use them, and add to them, and so go on and develop from them a language of music, which can be understood universally. But probably this will never be done. Probably, too, it would be found to be undesirable. It would be almost certain to lead to an amount of imitation that would cause the art to decline.

There are, however, two methods open to composers, from the applications of which less danger of this kind could be apprehended. One is to originate their own motives, and then to use them in their own compositions, according to the repetitious methods of Wagner. The other, and, in case of complete success, a better method—but only a genius of the very highest order could develop it—would be, according to the principles underlying representation in duration, force, pitch, and quality that have here been mentioned, to form a musical alphabet of the emotions, each factor of which should not be a whole motive but could be used as a part of a motive. Thus used, it is possible to conceive that such an alphabet might leave abundant scope for originality, and yet render the motive, whenever heard, at least comparatively intelligible. There is a natural, inarticulated language of the emotions employed by all of us. What reason is there in nature to suppose otherwise than that all its elements might be comprehended and tabulated with sufficient definiteness in a few score of carefully related forms of sound? As it is, even now, every really great composer recognizes the existence of this language and unconsciously applies its principles. Why should they not be formulated so that all men could know them? Why should not the psychological correspondences of music be unfolded with as much definiteness as those of elocution

to which in their elements they are analogous? Or, if the formulation of the principles involved would necessitate, as it might, artistic difficulties and dangers impossible to overcome, why, at least, might there not be developed among men such a concurrence of opinion with reference to the principles themselves that the composer would feel constrained, more often than at present, to regard them? And then, in the degree in which they were carried out persistently and accurately, would not the musical world be made familiar with them, and even the unmusical be made, at any rate, to recognize their existence?

Were this done we should have no more writers upon æsthetics with outer and inner senses—ears and minds—so dull of perception as to declare that music does not appeal, as do the other arts, to intelligence, or that it is presentative and not representative. It has been abundantly shown here that this view is erroneous; but it would be an advantage to have the recognized conditions of the art clearly reveal the fact. It would be an advantage to have music seen by all in its true position, standing side by side with poetry, painting, sculpture and architecture, and representing, in just as legitimate a sense as they, its own appropriate phase of the influence which nature exerts not merely upon the auditory nerves—which alone would not account for its spiritual effects—but also upon the mind.

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